

Assessment of geologically ...

S/169/63/000/001/044/062  
D218/D307

which in turn means that the content established at concentrating plants is found to be higher than the geological estimates, and is thought to be abnormal. Moreover, this artificial underestimation of the useful-component content leads to a deterioration in the efficiency of extraction and processing. It masks deficiencies in the technology of ore processing and complicates the determination of the true losses and the exhaustion of ores.

[Abstracter's note: Complete translation]

Card 2/2

~~YERMO~~ LAYEV, K. Ye.

SHCHERBA, G.N.; YERMOLAYEV, K.Ye.; KAYUPOV, A.K.; KIM, V.A.; NIKITINA, L.G.;  
FLEROV, Ye.A.; SATPAYEV, K.I., akademik, red.; BOK, I.I., red.;  
SEMENOVA, M.V., red.; POPOV, N.D., tekhn.red.

[Geology of the Leninogorsk and Zyryanovsk mine regions in the  
Altai Mountains] Geologiya Leninogorskogo i Zyryanovskogo  
rudnykh polei na Altae. Pod red. K.I. Satpaeva. Moskva, Gos.  
nauchno-tekhn. izd-vo lit-ry po geol. i okhrane neдр, 1957. 370 p.  
(MIRA 11:1)

1. Akademiya nauk Kazakhskoi SSR, Alma-Ata.  
(Kazakhstan--Geology, Structural)

BELOV, Aleksandr Ivanovich; TIMOFEYEV, P.G., kand. ekon. nauk,  
otv. red.; YERMOLAYEV, L.A., kand. fiz.-matem. nauk,  
otv. red.; KOROLEVA, N.N., red.

[Mathematical and economic calculations in agriculture]  
Matematiko-ekonomicheskie raschety v sel'skom kho-  
ziaistve. Alma-Ata, Nauka, 1965. 201 p. (MIRA 1847)

L 2775h-66 EWT(n)/EWA(d)/EWP(t)/ETI 1JP(c) JD/JG  
ACC NR: AP6015640 SOURCE CODE: UR/0413/66/000/009/0050/0050  
INVENTOR: Dyubua, B. Ch.; Yermolayev, L. A.  
ORG: none  
TITLE: An antiemission alloy. / Class 21, No. 181202  
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 50  
TOPIC TAGS: antiemission alloy, rhenium alloy, carbon containing alloy  
ABSTRACT: This Author Certificate introduces a rhenium-base antiemission alloy used for vacuum tubes. In order to reduce the electron emission, 0.1—5 at% carbon is added to the alloy. [WW]  
SUB CODE: 11/ SUEM DATE: 07Jan65/ ATD PRESS: 5001

Card 1/1

UDC: 621.385.032.2.6/1.3.5.55

16.3400

35838  
S/044/62/000/002/026/C92  
0111/C333

AUTHOR: Yermolayev, L. A.  
TITLE: Some theorems on the stability of a denumerable almost linear system of differential equations the linear part of which is reducible  
PERIODICAL: Referativnyy zhurnal, Matematika, no. 2, 1962, 53, abstract 2B238. ("Uch. zap. Kazakhsk. gos. zhensk. ped. in-ta", 1960, vyp. 3, 341-346)  
TEXT: The systems

$$\frac{dy_s}{dt} = \sum_{k=1}^{\infty} p_{sk}(t) y_k + f_s(t, y_1, y_2, \dots), \quad (1)$$

$$\frac{dy_s}{dt} = \sum_{k=1}^{\infty} p_{sk}(t) y_k \quad (s = 1, 2, \dots), \quad (2)$$

are considered. Let  $y_1(t), y_2(t), \dots$  be a solution of (2) and  $y(t) =$

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S/044/62/000/002/G26/C32  
C111/C333

Some theorems on the stability of ...

= sup ( $|y_1|$ ,  $|y_2|$ , ...) its norm. Under certain assumptions estimations are given for the norm of the solutions of (2), and from this it is concluded on the uniform stability of the solutions of (1).

Note of the reviewer: 1.) The proof of theorem 2 is wrong; however, the theorem itself is correct, it is an obvious consequence of the inequality

$$|y_s(t)| \leq |y_s(t_0)| + \int_{t_0}^t \sum_{k=1}^{\infty} |P_{sk}(\tau)| |y_k(\tau)| d\tau \leq \\ \leq y(t_0) + \int_{t_0}^t P(\tau) y(\tau) d\tau.$$

2.) In the formulation of theorem 1 there is a misprint, it should read  $\leq De^{-c^2(t-t_0)}$ .

[Abstracter's note: Complete translation.]

Card 2/2

f

DYUBUA, B.Ch.; VERMOLAYEV, L.A.

Secondary electron emission from rhenium. Fiz. tver. tela 6  
no.3:757-759 Mr '64.

Secondary electron emission from tungsten - hafnium alloys.  
Ibid.:760-763 (MIRA 17:4)

BR

ACCESSION NR: AP4019833

S/0181/64/006/003/0757/0759

AUTHORS: Dyubua, B. Ch.; Yermolayev, L. A.

TITLE: Secondary electron emission in rhenium

SOURCE: Fizika tverdogo tela, v. 6, no. 3, 1964, 757-759

TOPIC TAGS: secondary electron emission, rhenium, TU 3 25 61 rhenium plate, degassing

ABSTRACT: The authors have determined the dependence of secondary electron emission on energy of the primary electrons for rhenium fused in argon and for rhenium plate, depending on the temperature to which the target is heated. This dependence is shown graphically in Fig. 1 on the Enclosure. A reproducible maximal value for the coefficient of secondary electron emission was obtained for rhenium: 1.6 at a primary-electron energy of 750 ev. This is not in agreement with the value normally given in the literature. It is natural to suppose that the initial drop in coefficient of secondary emission on heating the sample is due to degassing the target. A shift in the value of primary-electron energy is

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ACCESSION NR: APL019833

generally observed during degassing, the highest value of the coefficient being found at the higher energies. This shift is also observed during degassing of rhenium. The succeeding increase in coefficient of secondary emission may be associated with further purification of the target, both of adsorbed gas and of readily volatile impurities (K, Mg, and others). "The authors take this opportunity to express their thanks to Professor A. R. Shul'man for his discussion of the technique and results of the work and for valuable suggestions." Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 21Aug63

DATE ACQ: 31Mar64

ENCL: 01

SUB CODE: NP

NO REF SOV: 006

OTHER: 003

Card 2/3

ACCESSION NR: AP4019833

ENCLOSURE: 01

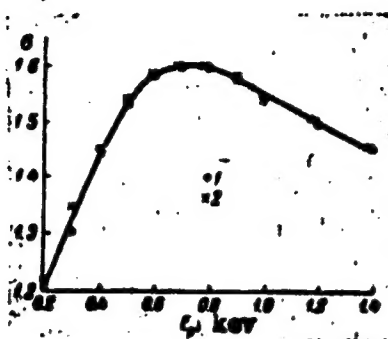


Fig. 1. Dependence of the coefficient of secondary electron emission ( $\delta$ ) on primary-electron energy ( $E_p$ ) for rhenium samples heated at temperatures above 2200K  
1 - fused rhenium; 2 - rhenium plate.

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ACCESSION NR: AP4019834

S/0181/64/006/003/0760/0763

AUTHORS: Dyubua, B. Ch.; Yermolayev, L. A.

TITLE: Secondary electron emission in alloys of tungsten and hafnium

SOURCE: Fizika tverdogo tela, v. 6, no. 3, 1964, 760-763

TOPIC TAGS: secondary electron emission, alloy equilibrium diagram, tungsten, hafnium

ABSTRACT: The authors have determined the dependence of secondary electron emission on the energy of primary electrons for pure hafnium and five different alloys with tungsten. All measurements were made in sealed tubes. The electron beam had a tungsten cathode and was focused electrostatically. The dependence of the coefficient of secondary emission was found to lack uniformity. It passed through a maximum, the highest value of this coefficient, 1.55, being reached at 6% hafnium. The results of the measurements are summarized in Figs. 1 and 2 on the Enclosure. "The authors express their thanks to Professor A. R. Shul'man for discussing the work and offering valuable suggestions." Orig. art. has: 3 figures.

ASSOCIATION: none

Card 1/5

DYUBUA, B.Ch.; YERMOLAYEV, L.-.

Secondary electron emission from rhenium-tungsten and tantalum-titanium alloys. Izv. AN SSSR. Ser. fiz. 28 no.9:1508-1513 1962.

(MIRA 17010)

L 07093-67 EWP(e)/EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG/AT/WH  
ACC NR: AP6019005 SOURCE CODE: UR/0109/66/011/006/1149/1150

AUTHOR: Dyubua, B. Ch.; Yermolayev, L. A.; Kultashev, O. K.

ORG: none

TITLE: Emission properties of Pt-Th, Ir-Th, Os-Th and Re-Th alloys

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1149-1150

TOPIC TAGS: electron emission, emissivity, thermionic emission, secondary electron emission, *THORIUM ALLOY*

ABSTRACT: The results of an experimental investigation of thermionic and secondary-electron emission of high-melt alloys are reported. The microsections of the test specimens were two phase: Re<sub>1</sub>Th, Os<sub>1</sub>Th, Ir<sub>1</sub>Th, and Pt<sub>1</sub>Th (A. E. Dwight, Trans. Am. Soc. Metals, 1961, 53, part 1, 479; J. R. Thomson et al., Common Metals, 1964, 6.1, 3). The results are tabulated below:

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UDC: 669.231 / 233.5.018.5:621.385.7

L 07093-67

ACC NR: AP6019005

Alloy	Work function	Temp.	Max.
	1600K ev	coeff. ev/1K	sec.-el. emiss.
Pt-Th 2%	4,00	$6 \cdot 10^{-8}$	1,57
Ir-Th 2%	3,90	$4 \cdot 10^{-8}$	2,00
Os-Th 2%	3,08	$< 10^{-8}$	2,07
Re-Th 2%	3,09	$< 10^{-8}$	1,95

Orig. art. has: 1 table.

SUB CODE: 20, 09 / SUBM DATE: 17Nov65 / ORIG REF: 006 / OTH REF: 003

Card 2/2 LC

L 07092-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6019006

SOURCE CODE: UR/0109/66/011/006/1150/1151

AUTHOR: Vasil'yeva, Ye. V.; Dyubua, B. Ch.; Yermolayev, L. A.;  
Kultashev, O. K.

ORG: none

TITLE: Emission properties of Pt-La, Ir-La, Os-La alloys

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1150-1151

TOPIC TAGS: electron emission, emissivity, thermionic emission, secondary  
electron emission, LANTHANUM, ALLOY, PLATINUM CONTAINING ALLOY,  
IRIDIUM CONTAINING ALLOY, OSMIUM CONTAINING ALLOY

ABSTRACT: The results are reported of an experimental investigation of  
thermionic and secondary-electron emission<sup>21</sup> of Os-La (with a Laves phase Os<sub>2</sub>La),  
of Pt-La (with a Pt<sub>3</sub>La phase), and of Ir-La (with an Ir<sub>3</sub>La phase) alloys; see  
A. E. Dwight, Trans. Am. Soc. Metals, 1961, 53, part 1, 479; T. H. Geballe

Card 1/2

UDC: 669.231 / 233.5.018.5 : 621.385.7

L 07092-67

ACC NR: AP6019006

et al., Phys. Rev., 1965, 137, A119. The results are tabulated below:

Alloy	Work	Temp.	Max.
	function	coeff.	sec.-el.
	1600K	coeff.	emiss.
	ev	ev/1K	
Pt-La 0,5%	4,01	$2 \cdot 10^{-6}$	1,73
Ir-La 0,5%	2,89	$4 \cdot 10^{-6}$	2,47
Os-La 0,5%	2,71	$6 \cdot 10^{-6}$	2,20

Orig. art. has: 1 table.

SUB CODE: 20, 09 / SUBM DATE: 17Nov65 / ORIG REF: 002 / OTH REF: 002

Card 2/2 LC



KOSTYKOV, Yu.V.; YERMOLAYEV, L.N.; VLADIMIROV, V.G., podpolkovnik,  
redaktor ; ~~LEVINSKAYA, N.Z.~~, tekhnicheskij redaktor.

[Radio arater's first book] Pervaja kniga radioliubitelia.  
Moskva, Voen.isd-vo Ministerstva obrony SSSR, 1955. 301 p.  
(Radio-- Amateurs' manuals) (MLRA 8:11)

KOSTYKOV, Yuriy Vasil'yevich; YERMOLAYEV, Lav Nikolayevich; VLADIMIROV,  
V.T., red.; MEDNIKOVA, A.N., tekhn.red.

[First book for the radio amateur] Pervaya kniga radiolubitel'sta. Izd.2., perer. i dop. Moskva, Voen.izd-vo M-va obor.  
SSSR, 1961. 287 p. (MIRA 14:3)  
(Radio)

YERMOLAYEV, L. [5]

"Projective Image of a Surface," Dok. AN, 26, No. 8, 1940.

YERMOLAYEV, L. [5]

"Some Classes of Punctual Connexions of Surfaces, Determined by Projective Images."

Dok. AN, 27, No. 5, 1940. c1940-.

YEREMAYEV, L. S.

Klassifikatsiya vzaimno odnoznachn ykh tochechnykh sootvetstviy analiticheskikh poverkhnostey. Dan, 31(1941), 425-427. Differentsial' naya geometriya vektornogo polya, kompleks pryamkh, opredelyaemkh polem. Tomsk, Izv. Nil mater. 1 mekh. un-ta, 3:1 (1946), 111-124.

SO: Mathematics in the USSR, 1917-1947  
edited by Kurosh, A. G.,  
Markushevich, A. I.,  
Rashevskiy, P. K.  
Moscow-Lenigrad, 1948

YERMOLAYEV, I.S., kandidat tekhnicheskikh nauk.

Characteristics of memory devices using magnetic number-code  
recording and operating on the parallel principle. Trudy MVU  
no.55:34-46 '55. (MLRA 9:8)  
(Information storage and retrieval systems)

YERMOLAYEV, L.S., kandidat tekhnicheskikh nauk; PETROV, V.Ya., inzhener.

Effect of the precision in magnetic recording machines on the  
value of bending generatrices of wide magnetic tapes. Trudy NVTU  
no.55:62-75 '55. (MLRA 9:8)  
(Magnetic recorders and recording)

YERMOLAYEV, L.S., dots., kand.tekhn.nauk

Semiconductor rectifiers. Elek. i topl.tiaga 2 no.4:40-43 Ap '58.  
(MIRA 12:3)

(Transistors)



VOLKOV, N.P.; YERMOLAYEV, L.S.; RADIONOV, V.A.

Magnetoelectric induction converter with a high-frequency inductor.  
Priberostroyeniye no.9:19-20 S '60. (MIRA 13:9)  
(Electric current converters)

YERMOLATEV, Lev Sergeyevich, kand. tekhn. nauk; NEKHLYUDOVA, A.S., red.;  
NAZAROVA, A.S., tekhn. red.

[Nature of light] Priroda sveta. Moskva, Izd-vo "Znanie" Vses.  
ob-va po rasprostraneniю polit. i nauchn. znaniy, 1961. 40 p.  
(Narodnyi universitet kul'tury. Estestvennonauchnyi fakul'tet,  
no.7) (MIRA 14:9)

(Light)

13 2720

37857

S/049/62/000/006/002/002  
D207/D304

AUTHORS: Morozov, V.M., Bolyunova, A.D. and Yermolayev, M.A.

TITLE: On calibrating photoelectric measurements of weak light sources

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya geofizicheskaya, no. 6, 1962, 840-844

TEXT: During the IGY the authors measured photoelectrically the night-sky emission using, as light standards, two ZnS:Cu phosphors  $\Phi K$ -106 (FK-106) activated with radioactive nuclides  $Cs^{137}$  (phosphor No. 1) and  $Sr^{90}$  (phosphor No. 2). The phosphors were developed and prepared at the Laboratoriya lyuminestsentsii fizicheskogo instituta im. P.N. Lebedeva AN SSSR (Luminescence Laboratory, Physics Institute imeni P.N. Lebedev, AS USSR). The present paper reports a study of the variations of the intensity of emission of these two phosphors with temperature and with time. The temperature varied from about  $-5^{\circ}C$  to about  $+40^{\circ}C$ . Before measurements, the phosphors were kept at each of these temperatures for several

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On calibrating photoelectric ...

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hours in order to reach equilibrium. It was found that at a certain emission wavelength  $\lambda^1$  (5550 Å for phosphor No. 1 and  $< 5280$  Å for No. 2) there was no change of the emission intensity on heating from  $-5^\circ\text{C}$  to  $+40^\circ\text{C}$ . At  $\lambda < \lambda^1$  the change was negative (a decrease) and at  $\lambda > \lambda^1$  the change was positive (a rise). If sufficient time was not allowed for the phosphors to reach equilibrium, then a temperature drop produced first a fall of the emission intensity, followed by a slow rise to the equilibrium value; this happened even at  $\lambda = \lambda^1$ . The emission intensity of the phosphors decayed with time faster than was expected from the decay of the radioactive activators: 15-35% fall (varying with the emission wavelength) for phosphor No. 1 after  $11\frac{1}{2}$  months; 10-25% for phosphor No. 2 also after  $11\frac{1}{2}$  months. If these variations with time and temperature are allowed for, the phosphors can be used successfully as weak light sources suitable for calibration of photometers. The authors thank V.L. Levshin and L.A. Pakhomicheva for supplying the phosphor materials and for advice. There are 1 figure and 2 tables.

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On calibrating photoelectric ...

S/049/62/000/006/002/002  
D207/D304

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki atmosfery  
(Institute of Physics of the Atmosphere USSR)

SUBMITTED: January 24, 1962

*f*

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YERMOLAYEV, M.D.  
26(4)

PHASE I BOOK EXPLOITATION

SOV/2023

Rumyantsev, Sergey Vasil'yevich, Mikhail Dmitriyevich Yermolayev,  
Vladimir Ivanovich Domrachev, Aleksey Sergeyevich Tikhonov, and  
Aleksandr Alekseyevich Bulavkin

Issledovaniye fakel'noy sistemy zazhiganiya primenitel'no k aviat-  
sionnym dvigatelyam (Analysis of Flame Ignition as Applied to Air-  
craft Engines) Moscow, Oborongiz, 1958. 111 p. (Series: Kazan'.  
Aviatsionnyy institut. Trudy, 39) No. of copies printed not given.

Ed. (Title page): S.V. Rumyantsev; Ed. (Inside book): S.I. Bumshteyn,  
Engineer; Ed. of Publishing House: M.S. Anikina; Tech. Ed.: L.A.  
Garnukhina; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This book may interest workers of research organizations,  
designers of mobile and stationary engines, and also instructors  
and students of vuzes.

COVERAGE: This book analyzes the working process in piston engines  
with flame ignition and shows the advantages of this type of ig-  
nition over other types. The theoretical considerations presented  
were verified experimentally. The designed and tested experimental

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# Analysis of Flame (Cont.)

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engine units with precombustion chambers made possible optimum design of construction elements and selection of optimum parameters of the working process. The book briefly describes work done by the collective of the Department of the Theory of Aircraft Engines of KAI (Kazan' Aviation Institute) on aircraft flame ignition engines and describes achievements in this field reflected in Soviet literature. The following personalities connected with this branch of science are mentioned: A.S. Sokolik and A.N. Voynov, Institut Khimicheskoy fiziki, AN SSSR (Institute of Chemical Physics, Academy of Sciences, USSR); L.A. Gussak; M.M. Maslennikov; S.M. Kogarko; and S.D. Kolosov. There are no references.

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Card 6/6

IS/sfm  
7-28-59

YERMOLAYEV, M.D.

Organization of the combustion process of a heavy fuel in  
combustion chambers of gas-turbine units. Trudy KAI no.66:  
3-17 '61. (MIRA 16:10)

(Gas turbines) (Combustion)

ACCESSION NR: AT4024391

S/2529/61/000/006/0003/0017

AUTHOR: Yermolayev, M. D.

TITLE: The organization of a heavy grade liquid fuel burning process in combustion chambers of gas turbine installations

SOURCE: Kazan. Aviatzionnyy Institut. Trudy\*, no. 66, 1961. Aviatzionnyye dvigateli (Aircraft engines), 3-17

TOPIC TAGS: combustion chamber, turbine, gas turbine, gas turbine installation, aviation, aircraft industry, kerosene, gas turbine fuel, combustion, bunker oil, fuel oil, crude oil, oil, nozzle, turbine nozzle, ceramic lining

ABSTRACT: Gas turbine installations, which at the present time are used extensively in aviation, are beginning to find a wide application in the national economy. At this stage, experience gained in the aircraft industry is applied to the development of stationary and transportation gas turbine installations. At the same time, the necessity arises to use as a gas turbine fuel the heavier fractions of petroleum distillates instead of kerosene. In 1959, investigations were made at the Kazanskiy Aviatzionnyy Institut

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(Aviation Institute of Kazan) on the organization of the combustion process of a heavy grade fuel oil (mazut F-12) in a combustion chamber section of a transportation gas turbine installation. Specifications listing the required parameters and a description of two steady and one starting systems required for the test were given by the author. The scope of the required investigations was divided into two phases. The basic results obtained during only the first phase of work were further described. Following are some data on the tested, heavy-grade, bunker oil (mazut F-12): specific weight - 0.927 g/cm<sup>3</sup>, lower heat value - 9791 kcal/kg, theoretical air quantity required for complete combustion of 1 kg of fuel oil - 13.9 kg air/kg fuel, freezing point - minus 7 C, composition (percent) - carbon 86.3, hydrogen 9.1, sulphur 2.0, water 1.6, oxygen+nitrogen 0.9, and ashes 0.1, of which 60 % form resinous substances. The viscosity of heavy bunker oils is about 60-100 E at 20 - 10 C; therefore, a preheat of fuel oil to 100-120 C is applied to ascertain sufficient atomizing. Elsewhere, following preheating temperatures were recommended: solar oil - to 122 C; heavy bunker oil (mazut) - to 184 C; industrial grade fuel oil (mazut) - to 194 C; crude oil from Ukhta - to 108 C. In transportation-gas-turbine installations, such high preheating can create some operational difficulties. It was proposed that the heavy fuel oil be preheated to only 60-70 C, corresponding to 8 E, and

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to develop mixing methods with air, ascertaining an effective combustion. Nozzles of industrial boiler installations using air or steam-atomizing were not satisfactory in the case of transportation installations where the heat load per unit volume of flame space is much higher. Attention was drawn to the possibility of improving the combustion process by an application of ceramic lining in the combustion chamber or of a muffle around the root of the torch, thus also improving the fouling characteristics. However, the tested combustion chamber was not lined. The experimental part of the investigation was conducted in two installations; in one of them the fuel nozzles were cold-tested; in the other, combustion tests were run on an assembled nozzle with a combustion chamber. Six different nozzle types were tested. In the cold tests, the fuel oil temperature was varied from 15 to 100 C. Following parameters were determined for each of the nozzle types: capacity, atomization angle, distribution of fuel in cross-sections of the torch at various fuel supply pressures and preheat temperatures. At nozzles with air-atomizing, atomizing air supply pressures were also recorded. In combustion tests, the fuel oil was preheated. The combustion chamber was started on kerosene or diesel oil; when the basic fuel oil reached the preheat temperature, the starting fuel supply was cut off. Basically, the following combustion characteristics were determined as a function of the air excess coefficient: completeness of combustion; gas temperature and non-uniformity of the temper-

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ACCESSION NR: AT4024391

ature field at the combustion chamber outlet, heat load per unit volume of flame space, and the pressure efficiency. In addition, fuel temperature, atomizing air pressure, and other parameters were determined. On the basis of the performed tests, it was concluded that: (1) it is possible to organize an effective combustion of heavy grade fuel oil (mazut F-12) in combustion chambers of gas turbine installations with a heat load per unit flame space volume of  $5 \times 10^6$  to  $30 \times 10^6$  kcal/hr-m<sup>3</sup>-ata; (2) it is possible to obtain combustion chamber pressure efficiencies of 0.92 - 0.95; (3) nozzle type No. 6 (see Fig. 1 of the Enclosure) gives the best results in the tested combustion chamber. Combustion completeness of 0.98 - 0.99 was obtained in the air excess coefficients ranges of 4.5 to 10.5 during the basic, steady states of operation; nozzle No. 6 was of a two-stage centrifugal type, suitable for work with mazut F-12 without air atomizing in the range of air excess coefficients 4 to 15 at a fuel supply pressure above 15 kg/cm<sup>2</sup> and a fuel preheat above 100 C; (4) in starting and cruising systems, and at lean mixtures (air excess coefficient greater than 15), and at fuel supply pressures below 15 kg/cm<sup>2</sup>, the necessity arises to apply additional air-atomizing; in nozzle No. 6, the consumption of atomizing air is 5 to 10 g/sec, at a pressure 2 to 4 kg/cm<sup>2</sup> higher than at the inlet of the combustion chamber; (5) a preheat temperature of mazut F-12 is not lower than 100 C.

Card 4/8



ACCESSION NR: AT4024301

The work was carried out at the Kazanskiy aviatsionnyy institut (Kazan Aviation Institute) by an organized group consisting of M.D. Yermolayev, A.A. Bulavkin, V.A. Kostorin, I. N. Dyatlov, A. Ya. Khismatullin, A. L. Novikov, and E.A. Petrov under the supervision of Yu. K. Zastel. Orig. art. has: 2 formulas, 8 figures, and 4 tables.

ASSOCIATION: Aviatsionnyy institut, Kazan (Aviation Institute, Kazan)

SUBMITTED: 25May61

DATE ACQ: 15Apr64

ENCL: 01

SUB CODE: FP, PR

NO REF SOV: 008

OTHER: 001

Card 5/8

YERMOGLAYEV, M.G.

Park in the Petrovskoye-Razumovskoye Farmstead, memorial of  
orchard growing in the 18th century. Izv. TSKhS, no. 6:213-224  
'64 (MIRA 18:1)

1. Stantsiya dekorativnogo sadovodstva Moskovskoy ordena  
Lenina sel'skokhozyaystvennoy akademii imeni K.A. Timiryazeva.

YEREMOLAYEV, M.G., nauchnyy sotrudnik

Restoring the park of the Timiriazev Agricultural Academy [with  
summary in English]. Izv. TSKhA no.6:227-235 '58. (MIRA 12:1)  
(Moscow Province--Parks)

YEMOLAYEV, M. M.

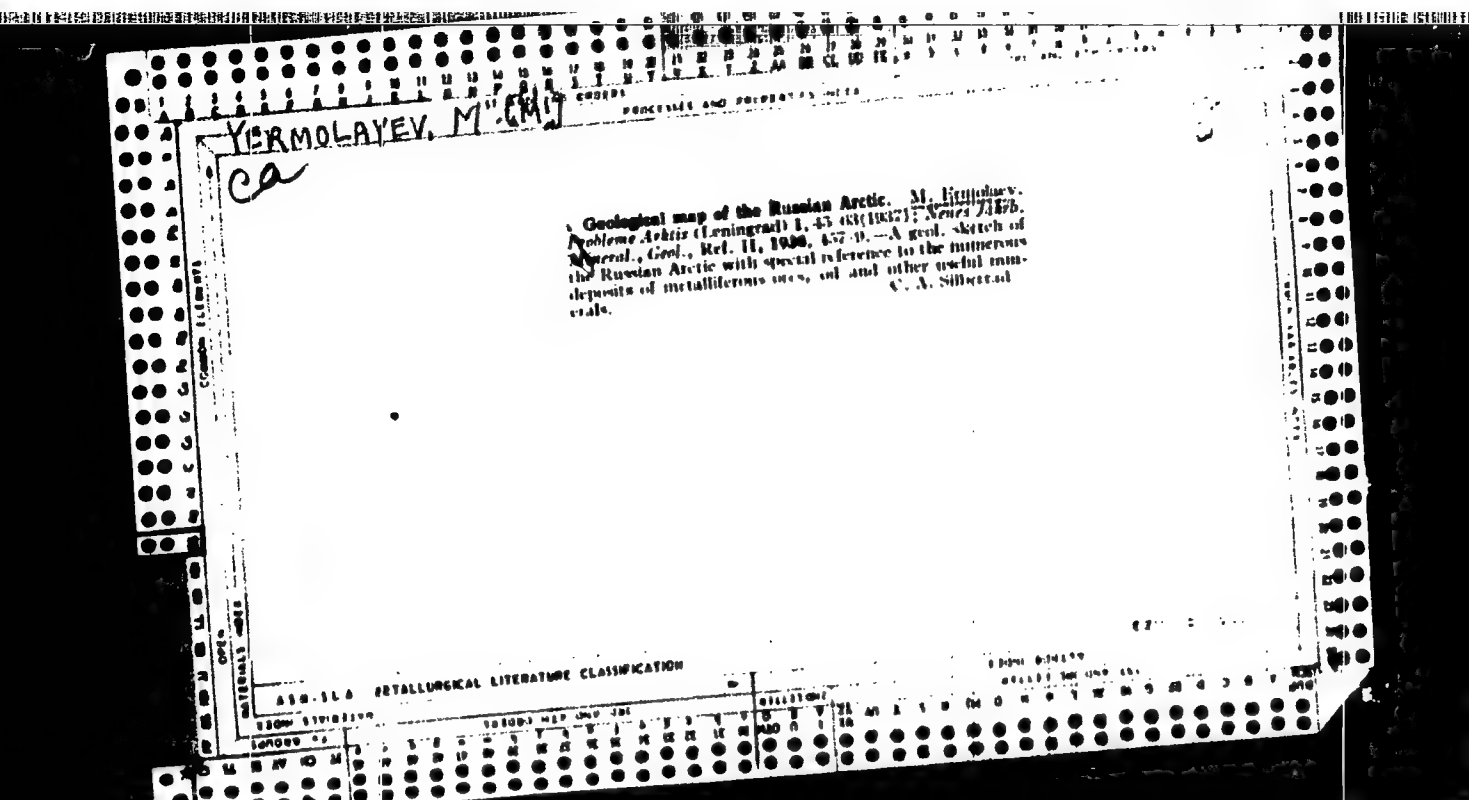
Geological and Geomorphological Notes on the Bol'shiye Lyakhovskiy Islands.  
Trudy. Sov. Nauch. Proizvod. Sil. Sev. Yakutsk #7, 1932.

SO: Trudy Arkticheskogo Nauchno-Issledovatel'skogo Instituta, GUSMF,  
Council of Ministers, Vol 201, 1948

YERMOLOV, M. M.

Geology and Minerals of the Novosibirsk Archipelago.  
Trudy Sov. Po Izuch. Proisvod. Cisl Yakutsk ASSR. #2 1933

SO: Trudy Arkitcheskogo Nauchno-Issledovatel'skogo Instituta, GUSMP,  
Council of Ministers, Vol 201, 1948



Yermolayev, M. M.

CS  
YERMOLAYEV, M. M.

PROCESSES AND DEPOSITS INDEX

Radioactivity and composition of Kara Sea mud. 1. M. Kurlov and M. M. Yermolayev. *Problemy Arktiki* 2, 67 (1957); *Soviet Jour. Mineral. Geol.*, Ref. 11, 1959, 1967. Exam. of a column of material (80 cm. wet, 70 cm. dry) taken from the bottom (565 m.) of the Kara Sea showed a decrease in its content from the top to a depth of 18-22 cm., below which it increases. Similarly the largest content of Th X occurred at the top of the column. No radioactive minerals were detected, but a change in the material with which the radioactivity was connected was noted at about 20 cm., where it is inferred that about 1000 years (perhaps more) ago a change occurred in the character of the deposits. C. A. S.

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

YERMOLAYEV, M. M.

Glaciological Excursion to Shokal'skiy Glacier at Russkaya Gavan.  
Mezhdunar. Geol. Kongr. XVII sessiya Novozemel'skaya Ekskursiya #2, 1937.

SO: Trudy Arkticheskogo Nauchno-Issledovatel'skogo  
Instituta, GUSMP, Council of Ministers, Vol 201,  
1948



YERMOLAYEV, M. M.

USSR/Hydrology  
Oceanology  
Clays

Jan/Feb 1948

"Lithogenesis of Plastic Clay Sea Sediments," M. M. Yermolayev, 17 p

"Izv Akad Nauk SSSR, Ser Geol" No 1

Describes primary stages of the lithogenesis of plastic clay sediments. Particular attention is paid to the Atlantic type of bottom of the Arctic seas of Eurasia. Discusses chemical composition. Explains reasons for uneven lithogenesis. Describes microorganisms found in these sediments and also the hydrogeological regime of the water systems. Gives some

Notes

USSR/Hydrology (Contd)

Jan/Feb 1948

reasons for the great changes in the conditions of the Kara Sea. Author studied distribution of manganese and radium to determine the absolute speed of settling and the stability of those changes occurring in the material of the sea bottom during the first stages of lithogenesis.

hmmh

FOR REVIEW M. M.

"Problems of Historical Hydrology of Seas and Oceans, VOZROJZENIJE (Problems of Geography) Symposium 7, 1988 (17-36)

SO: U-3032, 11 Mar 1953

ZUBEKOV, A.I.; YERMOLAYEV, M.M., ed. red.; BIRKENGOF, A.L., red.; GEMBEL',  
A.V., red.

[Climate of the U.S.S.R., lectures in a course on "Physical  
geography of the U.S.S.R."] Klimat SSSR; lektsii po kursu  
"Fizicheskaya geografiya SSSR." Leningrad, Leningr. gos. pedagog.  
in-t, 1957. 37 p. (Russia--Climate) (MIRA 11:12)

AFANAS'YEV, A.P.; ~~YERMOLOV, M.M.~~

Mineralogy of the ancient weathering crust of the western slope  
of the Baltic Shield. Izv.Kar.i Kol.fil.AN SSSR no.5:23-37  
'58. (MIRA 12:9)

1. Geologicheskii institut Kol'skogo filiala AN SSSR.  
(Baltic Shield--Mineralogy)

3(5)

SOV/12-91-2-3/21

AUTHOR: Yermolayev, M.M.

TITLE: On the Paleo-Geomorphological Origin of the Eastern Slopes of the Baltic Platform and Some Data on the Formation of its Present Relief.

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1959, Nr 2, pp 137-148 (USSR)

ABSTRACT: The author studied the underground formations in the Eastern slope of the Baltic platform covered by a stratum of deposits. The platform has an overall direction from South to North, but it bends eastward (tables 1 + 2) in the middle part of the Onega River. The stratum has a great variety of geological elements (table 3) (including carbon) based mainly on a granite foundation. The author describes in detail the geological survey carried out by him. He refers to the work in this area previously done by the Ministerstvo geologii i okhrany nedr SSSR (Ministry of Geology and Conservation of Natural

Card 1/2

SOV/12-91-2-3/21

On the Paleo-Geomorphological Origin of the Eastern Slopes of the Baltic Platform and Some Data on the Formation of its Present Relief.

Resources of the USSR) and mentions the names of geologists A. Afanasyev, A.I. Lebedintsev, M.F. Vikulova, G. Fanderflit. There are 3 tables, 3 maps and 2 diagrams.

Card 2/2

YERMOLAYEV, M.M.

Geochemistry of rare-metal granitic pegmatites. Nauch.dokl.  
vys.shkoly; geol.-geog.nauki no.2:147-154 '59. (MIRA 12:8)

1. Leningradskiy universitet, geograficheskiy fakul'tet, kafedra  
fizicheskoy geografii.

(Metals, Rare and minor)

21(4)  
2(5)

SOV/12-91-3-1/14

AUTHOR: Yermolayev, M.M.

TITLE: The Possibility of Employing Various Methods of Contemporary Physics to Examine the Geographic Cover of the Earth

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1959, Vol 91, Nr 3, pp 205-219

ABSTRACT: This is a study concerning the use of modern physics by geographers to help them solve some of their problems. The study is divided into 4 sections: 1) determination of absolute age as a geographical problem; 2) the "sealed" vestiges and their utilization in paleogeography; 3) experimental physical geography; 4) geographical distribution of the H-bomb fallout. In the first section, an account is given of the geographical-chronological work done up to date by the use of: 1) the slow radioactive reactions, e.g. uranium lead, are of no use for geography; 2) inter-

Card 1/3



SOV/12-91-3-1/14  
The Possibility of Employing Various Methods of Contemporary  
Physics to Examine the Geographic Cover of the Earth

mediary radioactive elements, e.g. 17 isotopes in the chain between uranium and lead; 2) the elements which are gradually formed in the geographical crust of the Earth under the influence of cosmic rays, especially  $H^3$ ,  $C^{14}$ ,  $Cl^{36}$  and  $Be^{10}$ ; d) radioactive elements as components of the H-bomb fallout. The  $Al^{26}$  isotope is recommended for special attention by physico-geographers. Two methods are discussed in the 2nd section of the survey. The paleothermic method, where special attention is given to  $O^{16}$  and  $O^{18}$  isotopes and their role in the biosphere, and the paleomagnetic method. The author recommends further development of the work of Clayton and Epstein (Jour. Geol., 66,3, 1958): They studied the  $O^{18}/O^{16}$  ratios in coexisting quartz, carbonate and iron oxides from various geological deposits. The author points out to the specialists the neglected fact that water, which is bound to the structural grid of some clayish minerals

Card 2/3

SOV/12-91-3-1/14

The Possibility of Employing Various Methods of Contemporary  
Physics to Examine the Geographic Cover of the Earth

(e.g. kaolinite), can be a carrier of the height of temperature mark at the time at which the reaction took place. The author reports that a simple, portable magnetometer, based on nuclear resonance, is already constructed. The prehistorical locations of Earth's magnetic poles could be established in that way. American studies are reviewed in section 3. The fourth section shows that the entire biosphere of the Earth is in immediate danger of the effects of the H-Bomb fallout, especially by the radioactive strontium provoking cancer. The author finally proposes to organize a special committee to conduct paleogeographic research. This committee is to eventually be annexed to the VGO SSSR. His other proposal is to organize a special paleogeographical laboratory within VGO or to attach it to the Leningrad University. There is 1 table and 51 references, 30 of which are English, 11 Soviet, 6 German and 4 French.

Card 3/3

S/081/61/000/024/019/086  
B138/B102

AUTHOR: Yermolayev, M. M.

TITLE: Certain forms of interaction between lithosphere and biosphere

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1961, 126, abstract 24C12 (Dokl. na yezhegodn. chteniyakh pamyati L. S. Berga, IV - VII, 1956 - 1959. M.-L., AN SSSR, 1960, 75 - 100)

TEXT: A study of the relationship between lithosphere and biosphere leads to the conclusion that there are four main forms: fermentative, vitamin, hormonal and tissue. Deviations from the first form lead to the appearance of biochemical provinces of physiological and general excess or deficiency, and the provinces of phytocoenosis and biocoenosis do not coincide. The formation of such provinces is due to specific geological, geomorphological and physico-geographical conditions. For the vitamin and hormonal forms, biogeochemical deficiency provinces are known. Examples are given. It is stated that individual geochemical features have a systematic influence on the process of natural selection in plant

Card 1/2

Certain forms of interaction between ...

S/081/61/000/024/019/086  
B138/B102

and animal life. [Abstracter's note: Complete translation.]



Card 2/2

S/081/62/000/005/016/112  
B158/B110

AUTHOR: Yermolayev, M. M.

TITLE: Biogeochemical anomalies in the landscape as a result of interaction of lithosphere and biosphere

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 118, abstract 568 (Uch. zap. Latv. un-t, v. 37, 1961, 43 - 54)

TEXT: All the numerous processes of interaction of live and "dead" matter may be reduced to four connecting lines (through ferments, vitamins, hormones, and somatic effect) which lead to the participation of mineral substances in the formation of tissues and organisms. Such analysis is conditional since all four lines of interaction appear in nature simultaneously and only their joint, synchronous action has any biological significance. Examples are cited where these lines are broken, causing the emergence of a number of biogeochemical anomalies. [Abstracter's note: Complete translation.]

Card 1/1

YERMOLAYEV, M.M.

Several general laws causing the discreteness of geographical  
surroundings. Uch. zap. LGU no.317:54-66 '62. (MIRA 16:6)  
(Physical geography)

BOCRISOV, A.A.; YERMOLAYEV, M.I.; KATTERFEL'D, G.N.; KOZLOV, V.V.; KOZYREV, N.A.;  
LOZINA-LOTINSKIY, I.K.; LYUBARSKIY, K.A.; SUSLOV, A.K.; FROLOV, P.M.;  
KHODAK, M.A.

Nikolai Ivanovich Kucherov, 1891-1965; obituary. Izv. Vses. geog.  
ob-va 77 no.4:328-390 JI-Ag '65. (MIRA 18:8)

YERMOLAYEV, I. M. (Kiyev)

From the history of the development of health education in the  
Ukraine, 1917-1927. Vrach, delo no.8:139-140 Apr '60. (MIRA 13:9)  
(UKRAINE—HEALTH EDUCATION)



YERMOLAYEV, M.M., nauchnyy sotrudnik

Amateur talent activities in health education. Gig.1 san. 25 no.8:  
36-38 Ag '60. (MIRA 13:11)

1. Iz Ukrainskogo instituta kommunal'noy gigiyeny.  
(HEALTH EDUCATION)

.. YERMOLAYEV, M.M., nauchnyy sotrudnik

Universities of health and health education. Gig. i san. 26 no.11:  
68-71 N '61. (MIRA 14:11)

1. Iz Ukrainского nauchno-issledovatel'skogo instituta kommunal'noy  
gigiyeny.

(UKRAINE--HEALTH EDUCATION)

YERMOLAYEV, M.N.; CHOCHIA, N.S.; KRYM, I.Ya.

Geochemical method for studying landforms and some characteristics  
of the migration of trace elements in the Or'-Kumak watershed  
(Southern Urals). Vest. LGU 17 no.18:95-108 '62. (MIRA 15:10)  
(Ural Mountains--Geochemistry)  
(Ural Mountains--Trace elements)

YERMOLAYEV, M.P.

TIKHOMIROV, S.S., inzhener; YERMOLAYEV, M.P., inzhener.

Streetcar equipped with track polishing machinery. Gor.khoz.Mosk. 25 no.7:  
38-39 JI '51. (MIRA 6:11)

(Moscow--Street railroads) (Street railroads--Moscow)

*YERMO LAJEV, M.P.*

TIKHOMIROV, S.S., inzhener; YERMOLAYEV, M.P., inzhener.

New streetcar. Gor.khoz, Mosk. 25 no. 8:30-31 Ag '51.  
(Streetcars)

(MIRA 10:1)

*Yermolayev M.P.*

ALEKSEYEV, Aleksandr Petrovich; KAPITANOVSKIY, Lev Nikolayevich; TASTEVAN, Yevgeniy Edmundovich; CHEZHIK, Nikolay Ivanovich; SHPOLYANSKIY, Mikhail Leonovich; YERMOLAYEV, M.P., inzh., retsenzent; VOGTRESKINSKIY, N.N., inzh., red.; TIKHANOV, A.Ya., tekhn.red.

[All-metal streetcars; design, manufacture, and operation] TSel'no-metallicheskiy tramvainyi vagon; konstruktziya, tekhnologiya proizvodstva i ekspluatatsiya. Moskva, Gos.nauchno-tekhn.isd-vo mashinostroit. lit-ry, 1958. 287 p. (MIRA 11:7)  
(Streetcars)

YERMOLAYEV, M.P.

Machining speed surfaces on a vertical boring and turning  
lathe. Mashinostroitel' no.9:31-33 S '65.

(MIRA 18:12)

YERMOLAYEV, M.V.

"The Use of Nicotinic Acid to Increase the Effectiveness of  
Corn Rations During the Meat Fattening of Pigs";

dissertation for the degree of Candidate of Agricultural Sciences  
(awarded by the Timiryazev Agricultural Academy, 1962)

(Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, Moscow, No. 2,  
1963, pp 232-236)



CHERNIKOV, M.P.; YERMOLAYEV, M.V.

Hydrolysis of egg albumin with pepsin and the effect of thermal protein denaturation, acid medium and the addition of plant oil and carbohydrates on this process. Vop. pit. 23 no.2:31-35 Mr- (MIRA 17:10)  
Ap '64.

1. Laboratoriya biokhimii pitaniya Instituta AMN SSSR, Moskva.

**C.A.**

**YERMOLAYEV, N. F.**

Fractionation of copper-containing tailings from the magnetic separation of ore from the Gornoy mine in Vologorsk.  
M. Kuznetsov. *Novosti Tekhniki, Seriya Gornodolnoye*  
*Promyshlennost', No. 4, 18-19.*—Tailings obtained in the  
magnetic sepn. of Fe from this ore contain Cu, Au and Ag.  
Up to 80-85% of the Cu can be removed by comen. and  
fractionation; the tailings then contain about 0.2% Cu present  
mainly as oxide. The fraction media used are 0.15 kg.  
K ethylacetate, 0.04 kg. pine oil and up to 11 kg. Cnl  
per ton of ore. Up to 48-47% of Au and 24-47% Ag can  
be extd. from the Cu concentrate. A. A. Borzhilinsk

ASH & S.A. METALLURGICAL LITERATURE CLASSIFICATION

GROUP SYMBOLS

GROUPS 12

COLLECTIONS

SEARCHED SERIALIZED

**YERMOGLAYEV, N.F.**

S

8

**Development of the Centrifugal Casting Process for the Production of Cast Iron and Steel Tubes. N. Yermoglayev. (Izvestiya Akad. Nauk SSSR, No. 5-6, pp. 70-74). (In Russian). The progress of centrifugal casting abroad is reviewed and developments in this field in the U.S.S.R. are dealt with.**

A.I.B.-S.L.A METALLURGICAL LITERATURE CLASSIFICATION

E-Z

1900M STEELWORK  
19000M AS  
19000M HLT OXY GEN  
COLLATION  
E-Z  
BIBLIOG ONE DAY ISS

ERMOLAEV, NIKOLAI FEDOROVICH

Podruchnyi trubosvarshchika. Utv. v kachestve uchebnika dlia remesl. uchilishch.  
Moskva, Metallurgizdat, 1944. 138 p. illus.

Pipe welder's assistant.

DLC: TS280.E68

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of  
Congress, 1953.

~~ERMOLAEV, N. F.~~  
YERMOLAYEV, N. F.

Author: Ermolaev, Nikolai Fedorovich

Title: Welding of Pipes. (Svarshchik trub.

City: Moscow

Publisher:

~~Publication~~ State Scientific and Technical Publication of the curds and  
chromium metallurgy.

Date: 1945

Available: Library of Congress

Source: Monthly List of Russian Acquisitions. Vol. 3, No. 12, p. 837

YERMOLAYEV, N. F.

"Continuous Zinc Plating of Pipes", Stal', No. 7, 1948.

YERMOLAYEV, NIKOLAY FEDOROVICH

Mekhanicheskoe oborudovanie trubnykh tsekhov. 2. izd. Utverzhdeno v kachestve uchebnika dlia metallurgicheskikh tekhnikumov. Moskva, Metallurgizdat, 1949. 540 p. illus.

Bibliography: p. [539]-540.

Mechanical equipment of machine shops for pipe production.

DLC: TS280.B66 1949

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

YERMOLOV, N.F.; MATVEYEV, Yu.M., redaktor; GORDON, L.M., redaktor.

[Pipe rolling production] Truboprokatnoe proizvodstvo. Moskva, Gos.  
nauchno-tekhn. iss-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953.  
451 p. (MIRA 7:6)

(Pipe, Steel) (Rolling (Metalwork))



YERMOLAYEV, N.F., inzhener.

"Continuous pipe rolling" by A.A. Shevchenko. Reviewed by N.F. Ermolaev.  
Stal' 16 no.10:951-953 O '56. (MIRA 10:9)

1. Ministerstvo chernoy metallurgii SSSR.  
(Pipe, Steel) (Rolling (Metalwork)) (Shevchenko, A.A.)

YERMOLOV, N. F.

18(0)

PHASE I BOOK EXPLOITATION

SOV/2316

Akademika nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii

Metallurgiya SSSR, 1917-1957; [t.] II (Metallurgy in the USSR, 1917 - 1957; Vol 2) Moscow, Metallurgizdat, 1959. 813 p. Errata slip inserted. 3,000 copies printed.

Ed. (Title page): I. P. Bardin, Academician; Ed. (Inside book): G. V. Popova; Tech. Ed.: P. G. Isent'yeva.

PURPOSE: This book is intended for metallurgists.

COVERAGE: The articles in this collection present historical data on the achievements of Soviet metallurgy, both ferrous and nonferrous, during the period 1917-1957. Advances in theory and practical application are thoroughly discussed. Many of the articles describe the present status of individual branches of metallurgy and give an idea of what may be expected in the future. Advances made in other countries are also discussed. The articles are accompanied by a large number of references. For further coverage, see Table of Contents.

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**Metallurgy in the USSR (Cont.)**

SOV/2316

**TABLE OF CONTENTS:**

**Tselikov, A. I.,** Corresponding Member, USSR Academy of Sciences; **Ye. S. Rokotyan,** Doctor of Technical Sciences; **N. P. Gromov,** Candidate of Technical Sciences. (Ts NITMASH and TsNIICHM) Production of Rolled Stock 3

The authors present a historical review of the production of rolled stock in czarist Russia and the Soviet Union from 1721 to 1957. Developments in rolling technique and in the design of rolling mills for various purposes are discussed.

**Yermolayev, N. F.,** Engineer; and **P. K. Teterin,** Candidate of Technical Sciences. (TsNIICHM) Production of Steel Tubes 38

The article briefly outlines the history of steel-tube production in the USSR (beginning in 1893) and in other countries. The main methods of manufacturing seamless and welded steel tubular products at various Soviet and non-Soviet plants are described. There is some discussion of equipment.

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**Metallurgy in the USSR (Cont.)**

80V/2316

**Pavlov, I. M., Corresponding Member, USSR Academy of Sciences, Professor, Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Scientific Study of the Rolling Process**

56

This article is an extensive survey of scientific writings on the rolling process published in various countries including the USSR since 1859. The writings deal with historical development, friction between rolls and metal, force and power relations, deformation, high-speed rolling, and special methods of rolling.

**Bardin, I. P., Academician; and L. L. Pinkhusovich, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) The Rail Problem**

82

Historical information on the development of engineering standards for the acceptance of rails and on the amount of rails manufactured by openhearth, Bessemer, and Thomas processes is presented. Changes in weight and types of rails, improvements in quality and technique (e.g., quenching from rolling temperature and after reheating, use of alloy steel, etc.) are pointed out. Measures taken for further improvement and elimination of defects are mentioned.

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**Metallurgy in the USSR (Cont.)**

NOV/2316

Pinkhusovich, Candidate of Technical Sciences; and A. G. Nikonov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Achievements in Railroad Wheel and Tire Production 101

Changes in engineering specifications and improvements in production techniques and quality of tires and solid wheels in the USSR since 1940 are discussed. Further progress in this field is predicted.

Zimin, A. I., Professor, Doctor of Technical Sciences. (MVTU) Forging and Stamping Methods 113

This is a historical survey of developments in forging and stamping processes in Russia from prerevolutionary times up to 1957.

Levi, L. I. Candidate of Technical Sciences. (Moscow Institute of Machine Design) Production of Castings 141

The paper traces the general course of development and discusses problems in the theory of casting, casting alloys, basic melting processes, molding and core materials, nonmetallic molds, special casting methods (permanent mold casting, die casting, continuous

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**Metallurgy in the USSR (Cont.)**

SOV/2316

casting, centrifugal casting, investment casting, etc.), equipment, mechanization, and automation.

Bel'shin, M. Ya., Candidate of Technical Sciences; and G. V. Samsonov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences; and Institute of Powder Metallurgy, Ukrainian Academy of Sciences) Powder Metallurgy

175

The article is a general survey of the development and present state of powder metallurgy in the USSR. Theoretical and practical aspects of the preparation of cemented and sintered metal products are discussed.

Rykalin, N. N., Corresponding Member, USSR Academy of Sciences; N. O. Okerblom, Professor, Doctor of Technical Sciences; A. A. Yerokhin, Candidate of Technical Sciences; and M. Kh. Shorshorov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences; and Leningrad Polytechnic Institute) Progress in the Science of Welding Metals in the USSR

194

The authors discuss the studies that have been made in the USSR of the theoretical aspects of welding, beginning in the latter part of the nineteenth century. Specific topics are: investigation of the arc,  
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**Metallurgy in the USSR (Cont.)**

SOV/2316

theory of welding deformations and stresses, calculation methods used in planning the industrial production of welded structures, and the theory of strength of welded structures.

Kidin, I. N., Professor, Doctor of Technical Sciences. (Moscow Institute of Steel.) Use of High Frequency Currents in Physical Metallurgy

216

The author discusses the following: types of phase transformations occurring during rapid heating; the magnetic theory of the kinetics of induction heating; interconnection between original structure, steel composition, and the kinetics of heating; structure of austenite formed during induction heating; transformation of austenite into martensite and tempering after high-frequency hardening; ways of improving the technology of induction heat treatment; regimes of induction hardening; and application of induction heating in carburizing.

Gulyayev, A. F., Professor, Doctor of Technical Sciences. (Moscow Evening Institute of Machine Design) Heat Treatment and Thermochemical Treatment of Steel

239

After giving a classification of the types of heat-treating processes, the

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**Metallurgy in the USSR (Cont.)**

SOV/2316

author discusses the thermodynamics, mechanism, and kinetics of phase changes, as well as the formation, decomposition, and transformation of austenite. The concluding section deals with diffusion processes.

**Goloman, Kh. M., Engineer. (Stal'proyekt) Heating and Heat-treating Furnaces in USSR Ferrous Metallurgy**

272

This is a brief historical review of successive developments in the theory and design of various types of heating and reheating furnaces from earliest times up to 1957.

**Ivantsov, G. P., Candidate of Technical Sciences. (TsNIIChM) Theory of Fuel-fired Furnaces**

304

The article presents a review of developments in the theory and design of fuel-fired furnaces (mainly open-hearth) from 1905 to 1957, emphasizing the need for refining the theory on the basis of model testing.

**Lukashevich-Dubanova, Yu. T., Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Investigation of Nonmetallic Inclusions**

324

Card 7/15



**Metallurgy in the USSR (Cont.)**

SOV/2316

Various methods (metallographic, chemical, vacuum melting, etc.) for determining and removing nonmetallic inclusions and occluded gases are described. Results of investigations are discussed.

**Svet, D. Ya., Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Direct-reading Radiation Pyrometry of Liquid Metals in the USSR**

342

The author outlines the development of pyrometric methods in the USSR and then discusses specific questions of direct-reading radiation pyrometry (electronic systems used, investigation of emissive capacity of metal baths, direct-reading methods of controlling the temperature of metallurgical processes, calibration of systems for color pyrometry, and measurement of actual temperatures in metallurgy by radiation pyrometry).

**Mirkin, I. L., Professor, Doctor of Technical Sciences. (TsNITMASH) Development of Physical Metallurgy in the Soviet Union**

379

The paper reviews the development of physical metallurgy in Russia and other countries during the nineteenth and twentieth centuries, tracing successive advances made in various branches of the science.

Card 8/15

**Metallurgy in the USSR (Cont.)**

SON/2316

**Arkharov, V. I., Professor, Doctor of Technical Sciences; and Vonsovskiy, S. V., Corresponding Member, USSR Academy of Sciences. (UFAN) Present State of the Physics of Metals**

406

The authors define the subject matter of metallophysics, discussing the basic concepts of the quantum (electron) theory of metals and their "electronic" properties. In the second of the two major divisions of the article the authors discuss the contributions of Soviet scientists in various branches of this field.

**Kornilov, I. I., Doctor of Chemical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Chemistry of Metals in the USSR**

440

An account is given of the development of metallochemistry in Russia before and after the Revolution. Work done in specific fields (study of constitution diagrams, intermetallic compounds, and solid solutions) is discussed. The authors conclude by giving their views of the prospects for growth in the field of metallochemistry in the USSR.

**Lozinskiy, M. G., Doctor of Technical Sciences. (Institute of Machine Engineering, USSR Academy of Sciences) New Instruments and Methods for High-temperature Vacuum Metallography**  
Card 9/15

478

**Metallurgy in the USSR (Cont.)**

807/2316

This article gives a description of two devices for the metallographic investigation of heated specimens (above 900° C) developed in recent years at the Institute of Machine Engineering, USSR Academy of Sciences. With the first device, designated IMASH-5M, the specimen can be simultaneously studied with respect to its microstructure and the deformation process while in a heated condition and under vacuum; the second device, IMASH-6, is intended for determining the temperature dependence of the modulus of elasticity and of internal friction in metals. In addition, the article describes an instrument for studying the rate of vaporization in metals.

Oshchepkov, P. K., Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) The Problem of Using Penetrating Radiation in Metallurgy

514

The following topics are discussed: development of betatron gamma-ray flaw detection; use of betatrons for activation analysis; development of remote vision in metals; mass-spectrometric methods of analysis; application of ultrasonic image converters in metallurgy; development of new methods of recording weak radiation currents.

Card 10/15

**Metallurgy in the USSR (Cont.)**

80V/2316

**Borovskiy, I. V., Professor, Doctor of Physical and Mathematical Sciences; and Il'in, M. P., Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) X-ray Spectral Analysis of Metal Composition in Microvolumes**

544

Principles of the method are explained and various types of equipment are described. Application of the method for determining degree of homogeneity, analysis of the composition of phases and microlayers, and study of diffusion layers are discussed.

**Zhukhovitskiy, A. A., Professor, Doctor of Chemical Sciences. (Moscow Institute of Steel) Application of Radioactive Isotopes in the Study of Diffusion in Metals**

569

The author explains the use of radioactive isotopes for studying diffusion and thermodynamic characteristics. In addition, he discusses the connection between diffusion and thermodynamic characteristics of solutions, diffusion throughout the grain and along the grain boundaries, and diffusion in heterogeneous systems.

**Ignatov, D. V., Candidate of Physical and Mathematical Sciences. (Institute**

**Card 11/15**

**Metallurgy in the USSR (Cont.)**

80V/2316

of Metallurgy (Imeni A. A. Baykov, USSR Academy of Sciences) Structural and Kinetic Studies of the Mechanism of Oxidation of Metals and Alloys

598

This is a historical survey of investigations which have been conducted in this field both in Russia and other countries from the eighteenth century to the present. The author discusses investigations dealing with the oxidation mechanism at low and high temperatures and with theoretical studies in the field.

Davidenkov, N. N., Academician, USSR. (Leningrad Physicotechnical Institute, USSR Academy of Sciences) Studies in the Strength of Metals

627

The author reviews Soviet works in this field, some dealing with the properties of single crystals, others with polycrystalline specimens.

Kornilov, I. I., Professor, Doctor of Chemical Sciences; and I. I. Pryakhina, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Study of Creep-resistant Alloys in the USSR

659

Card 12/15

**Metallurgy in the USSR (Cont.)**

SOV/2316

This is a general survey of Soviet works in the field of creep-resistant alloys. The works deal with test methods, development of new high-temperature alloys, and theoretical investigation.

Bernshteyn, M. L., Candidate of Technical Sciences. (Moscow Institute of Steel) Creep-resistant Alloys

683

The author describes Soviet achievements in the development of high-temperature alloys from the post-Revolution reconstruction period up to 1957. Future prospects are indicated.

Rozenfel'd, I. L., Professor, Doctor of Chemical Sciences. (Institute of Physical Chemistry, USSR Academy of Sciences) Studies in the Corrosion of Metals

714

This paper reviews the most important works on corrosion of metals published between 1917 and 1957. All aspects of the subject (questions of theory, passivity, corrosion-resistant alloys, corrosion under specific conditions, protective films, etc.) are included.

Card 13/15

Metallurgy in the USSR (Cont.)

SOV/2316

Gudtsov, N. T., Academician (Deceased); and Mashtakova, L. D., Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Production of High-strength low-alloy Steel

749

The article reviews progress made in the Soviet Union and in other countries in the production of low-alloy steels.

Belov, A. F., Engineer. (State Committee on Aircraft Production Technology) Production of Light Alloys

770

The author describes successive advances made in the production of light alloys. All aspects are covered, including, besides the production of the alloys themselves, the teeming of ingots and the production of castings, sheet, extruded articles and forgings. Heat treatment is also discussed.

Kestner, O. Ye., Candidate of Technical Sciences. (VIAM) Heavy Nonferrous Alloys

796

Card 14/15

Metallurgy in the USSR (Cont.)

SOV/2316

Soviet accomplishments in the production of bronzes, brasses, nickel alloys, zinc alloys, bearing alloys, solders, heat-resistant alloys of high electrical conductivity, etc., are reviewed.

AVAILABLE: Library of Congress

Card 15/15

00/mg  
10-27-59



KRASINSKIY, I.M., inzh.; YERMOLAYEV, N.F., inzh.; SUKHAROVA, R.A.,  
red.; KUDRYAVITSKAYA, A.A., tekhn. red.

[Collection of inventions; manufacture of metallurgical equipment and metalworking machinery] Sbornik izobretenii; metallurgicheskoe mashinostroenie. Moskva, TSentr. biuro tekhn. informatsii, 1960. 153 p. (MIRA 15:3)

1. Russia(1923- U.S.S.R.) Komitet po delam izobreteniy i otkrytiy.

(Metallurgical plants--Equipment and supplies)

(Metalworking machinery--Technological innovations)

ADRIANOVA, V.P.; ANDREYEV, T.V.; ARANOVICH, M.S.; BARSKIY, B.S.; GROMOV, N.P.;  
GUREVICH, B.Ye.; DVORIN, S.S.; YEREMOLAYEV, N.F.; ZVOLINSKIY, I.S.;  
KABIZUKOVSKIY, A.F.; KAPLOVICH, A.P.; KASHCHENKO, D.S.; KLIMOVITSKIY,  
M.D.; KOLOSOV, M.I.; KOROLEV, A.A.; KOCHINEV, Ye.V.; LESKOV, A.V.;  
LIVSHITS, M.A.; MATYUSEINA, N.V.; MOROZOV, A.M.; POLUKAROV, D.I.;  
RAVINE, P.G.; ROKOTYAN, Ye.S.; SMOLYARENKO, D.A.; SOKOLOV, A.N.;  
USHKIN, I.M.; SHAPIRO, B.S.; EPSHTEYN, Z.D.; AVRETSKAYA, R.F., red.  
izd-va; KARASEV, A.I., tekhn.red.

[Brief handbook on metallurgy, 1960] Kratkii spravochnik metallur-  
ga, 1960. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i  
tsvetnoi metallurgii, 1960. 369 p. (MIRA 13:7)  
(Metallurgy)

YERMOLAYEV, N.F., inzh.

"Production of tubes on automatic and pilgrim rolling mills"  
by S.I. Borisov. Reviewed by N.F. Ermolayev. Stal' 21  
no.3:260-261 Mr '61. (MIRA 14:6)  
(Pipe mills) (Borisov, S.I.)

YEMOLAYEV, N.P., inzh.

Direction of pipe mill reorganization. Stal' 22 no.12:1103 B '62.  
(MIRA 15:12)

(Pipe mills)

Assessment of geologically ...

S/169/63/000/001/044/062  
D218/D307

which in turn means that the content established at concentrating plants is found to be higher than the geological estimates, and is thought to be abnormal. Moreover, this artificial underestimation of the useful-component content leads to a deterioration in the efficiency of extraction and processing. It masks deficiencies in the technology of ore processing and complicates the determination of the true losses and the exhaustion of ores.

[Abstracter's note: Complete translation]

Card 2/2

~~YERMOGLAYEV V. K. Ye.~~

SHCHERBA, G.N.; YERMOLAYEV, K.Ye.; KAYUPOV, A.K.; KIM, V.A.; NIKITINA, L.G.;  
FLEROV, Ye.A.; SATPAYEV, K.I., akademik, red.; BOK, I.I., red.;  
SEMENOVA, M.V., red.; POPOV, N.D., tekhn.red.

[Geology of the Leninogorsk and Zyryanovsk mine regions in the  
Altai Mountains] Geologiya Leninogorskogo i Zyryanovskogo  
rudnykh polei na Altae. Pod red. K.I. Satpaeva. Moskva, Gos.  
nauchno-tekhn. izd-vo lit-ry po geol. i okhrane neдр, 1957. 370 p.  
(MIRA 11:1)

1. Akademiya nauk Kazakhskoi SSR, Alma-Ata.  
(Kazakhstan--Geology, Structural)

BELOV, Aleksandr Ivanovich; TIMOFEEV, P.G., kand. ekon. nauk,  
otv. red.; YERMOLAYEV, L.A., kand. fiz.-matem. nauk,  
otv. red.; KOROLEVA, N.N., red.

[Mathematical and economic calculations in agriculture]  
Matematiko-ekonomicheskie raschety v sel'skom kho-  
ziaistve. Alma-Ata, Nauka, 1965. 201 p. (MIRA 1847)

L 2775h-66 EWT(m)/EWA(d)/EWP(t)/ETI LYP(c) JD/JG  
 ACC NR: AP6015640 SOURCE CODE: UR/0413/66/000/009/0050/0050  
 INVENTOR: Dyubua, B. Ch.; Yermolayev, L. A.  
 ORG: none  
 TITLE: An antiemission alloy. /Class 21, No. 181202  
 SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 50  
 TOPIC TAGS: antiemission alloy, rhenium alloy, carbon containing alloy  
 ABSTRACT: This Author Certificate introduces a rhenium-base antiemission alloy used for vacuum tubes. In order to reduce the electron emission, 0.1—5 at% carbon is added to the alloy. [WW]  
 SUB CODE: 11/ SUEM DATE: 07Jan65/ ATD PRESS: 5001

Card 1/1 *20*

UDC: 621.385.032.2.621.315.55



16.3400

35838  
S/044/62/000/002/026/C92  
0111/C333

AUTHOR: Yermolayev, L. A.  
TITLE: Some theorems on the stability of a denumerable almost linear system of differential equations the linear part of which is reducible  
PERIODICAL: Referativnyy zhurnal, Matematika, no. 2, 1962, 53, abstract 2B238. ("Uch. zap. Kazakhsk. gos. zhensk. ped. in-ta", 1960, vyp. 3, 341-346)  
TEXT: The systems

$$\frac{dy_s}{dt} = \sum_{k=1}^{\infty} P_{sk}(t) y_k + f_s(t, y_1, y_2, \dots), \quad (1)$$

$$\frac{dy_s}{dt} = \sum_{k=1}^{\infty} P_{sk}(t) y_k \quad (s = 1, 2, \dots), \quad (2)$$

are considered. Let  $y_1(t), y_2(t), \dots$  be a solution of (2) and  $y(t) =$

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S/044/62/000/002/G26/C32  
C111/C333

Some theorems on the stability of ...

= sup ( $|y_1|$ ,  $|y_2|$ , ...) its norm. Under certain assumptions estimations are given for the norm of the solutions of (2), and from this it is concluded on the uniform stability of the solutions of (1).

Note of the reviewer: 1.) The proof of theorem 2 is wrong; however, the theorem itself is correct, it is an obvious consequence of the inequality

$$|y_s(t)| \leq |y_s(t_0)| + \int_{t_0}^t \sum_{k=1}^{\infty} |p_{sk}(\tau)| |y_k(\tau)| d\tau \leq \\ \leq y(t_0) + \int_{t_0}^t P(\tau) y(\tau) d\tau.$$

2.) In the formulation of theorem 1 there is a misprint, it should read  $\leq De^{-c^2(t-t_0)}$ .

[Abstracter's note: Complete translation.]

Card 2/2

f

DYUBUA, B.Ch.; YERMOLAYEV, L.A.

Secondary electron emission from rhenium. Fiz. tver. tela 6  
no.3:757-759 Mr '64.

Secondary electron emission from tungsten - hafnium alloys.  
Ibid.:760-763 (MIRA 17:4)

BR

ACCESSION NR: AP4019833

S/0181/64/006/003/0757/0759

AUTHORS: Dyubua, B. Ch.; Yermolayev, L. A.

TITLE: Secondary electron emission in rhenium

SOURCE: Fizika tverdogo tela, v. 6, no. 3, 1964, 757-759

TOPIC TAGS: secondary electron emission, rhenium, TU 3 25 61 rhenium plate, degassing

ABSTRACT: The authors have determined the dependence of secondary electron emission on energy of the primary electrons for rhenium fused in argon and for rhenium plate, depending on the temperature to which the target is heated. This dependence is shown graphically in Fig. 1 on the Enclosure. A reproducible maximal value for the coefficient of secondary electron emission was obtained for rhenium: 1.6 at a primary-electron energy of 750 ev. This is not in agreement with the value normally given in the literature. It is natural to suppose that the initial drop in coefficient of secondary emission on heating the sample is due to degassing the target. A shift in the value of primary-electron energy is

Card 1/3

ACCESSION NR: APL019833

generally observed during degassing, the highest value of the coefficient being found at the higher energies. This shift is also observed during degassing of rhenium. The succeeding increase in coefficient of secondary emission may be associated with further purification of the target, both of adsorbed gas and of readily volatile impurities (K, Mg, and others). "The authors take this opportunity to express their thanks to Professor A. R. Shul'man for his discussion of the technique and results of the work and for valuable suggestions." Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 21Aug63

DATE ACQ: 31Mar64

ENCL: 01

SUB CODE: NP

NO REF SOV: 006

OTHER: 003

Card 2/3

ACCESSION NR: AP4019833

ENCLOSURE: 01

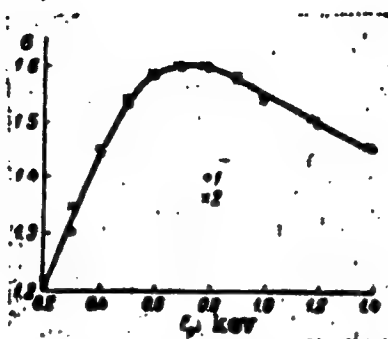


Fig. 1. Dependence of the coefficient of secondary electron emission ( $\delta$ ) on primary-electron energy ( $E_p$ ) for rhenium samples heated at temperatures above 2200K  
1 - fused rhenium; 2 - rhenium plate.

Card 3/3

ACCESSION NR: AP4019834

S/0181/64/006/003/0760/0763

AUTHORS: Dyubua, B. Ch.; Yermolayev, L. A.

TITLE: Secondary electron emission in alloys of tungsten and hafnium

SOURCE: Fizika tverdogo tela, v. 6, no. 3, 1964, 760-763

TOPIC TAGS: secondary electron emission, alloy equilibrium diagram, tungsten, hafnium

ABSTRACT: The authors have determined the dependence of secondary electron emission on the energy of primary electrons for pure hafnium and five different alloys with tungsten. All measurements were made in sealed tubes. The electron beam had a tungsten cathode and was focused electrostatically. The dependence of the coefficient of secondary emission was found to lack uniformity. It passed through a maximum, the highest value of this coefficient, 1.55, being reached at 6% hafnium. The results of the measurements are summarized in Figs. 1 and 2 on the Enclosure. "The authors express their thanks to Professor A. R. Shul'man for discussing the work and offering valuable suggestions." Orig. art. has: 3 figures.

ASSOCIATION: none

Card 1/5

DYUBUA, B.Ch.; YERMOLAYEV, L.-.

Secondary electron emission from rhenium-tungsten and tantalum-titanium alloys. Izv. AN SSSR. Ser. fiz. 28 no.9:1508-1513 1964.

(MIRA 17010)



L 07093-67 EWP(e)/EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG/AT/WH  
ACC NR: AP6019005 SOURCE CODE: UR/0109/66/011/006/1149/1150

AUTHOR: Dyubua, B. Ch.; Yermolayev, L. A.; Kultashev, O. K.

ORG: none

TITLE: Emission properties of Pt-Th, Ir-Th, Os-Th and Re-Th alloys

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1149-1150

TOPIC TAGS: electron emission, emissivity, thermionic emission, secondary electron emission, *THORIUM ALLOY*

ABSTRACT: The results of an experimental investigation of thermionic and secondary-electron emission of high-melt alloys<sup>27</sup> are reported. The microsections of the test specimens were two phase: Re<sub>1</sub>Th, Os<sub>1</sub>Th, Ir<sub>1</sub>Th, and Pt<sub>1</sub>Th (A. E. Dwight, Trans. Am. Soc. Metals, 1961, 53, part 1, 479; J. R. Thomson et al., Common Metals, 1964, 6.1, 3). The results are tabulated below:

Card 1/2

UDC: 669.231 / 233.5.018.5:621.385.7

L 07093-67

ACC NR: AP6019005

Alloy	Work function	Temp.	Max.
	1600K ev	coeff. ev/1K	sec.-el. emiss.
Pt-Th 2%	4,00	$6 \cdot 10^{-8}$	1,57
Ir-Th 2%	3,90	$4 \cdot 10^{-8}$	2,00
Os-Th 2%	3,08	$< 10^{-8}$	2,07
Re-Th 2%	3,09	$< 10^{-8}$	1,95

Orig. art. has: 1 table.

SUB CODE: 20, 09 / SUBM DATE: 17Nov65 / ORIG REF: 006 / OTH REF: 003

Card 2/2 LC

L 07092-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6019006

SOURCE CODE: UR/0109/66/011/006/1150/1151

AUTHOR: Vasil'yeva, Ye. V.; Dyubua, B. Ch.; Yermolayev, L. A.;  
Kultashev, O. K.

ORG: none

TITLE: Emission properties of Pt-La, Ir-La, Os-La alloys

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1150-1151

TOPIC TAGS: electron emission, emissivity, thermionic emission, secondary  
electron emission, LANTHANUM, ALLOY, PLATINUM CONTAINING ALLOY,  
IRIDIUM CONTAINING ALLOY, OSMIUM CONTAINING ALLOY

ABSTRACT: The results are reported of an experimental investigation of  
thermionic and secondary-electron emission<sup>21</sup> of Os-La (with a Laves phase Os<sub>2</sub>La),  
of Pt-La (with a Pt<sub>3</sub>La phase), and of Ir-La (with an Ir<sub>3</sub>La phase) alloys; see  
A. E. Dwight, Trans. Am. Soc. Metals, 1961, 53, part 1, 479; T. H. Geballe

Card 1/2

UDC: 669.231 / 233.5.018.5 : 621.385.7

L 07092-67

ACC NR: AP6019006

et al., Phys. Rev., 1965, 137, A119. The results are tabulated below:

Alloy	Work function	Temp.	Max.
	1600K ev	coeff. ev/1K	coeff. sec.-el. emiss.
Pt-La 0,5%	4,01	$2 \cdot 10^{-6}$	1,73
Ir-La 0,5%	2,89	$4 \cdot 10^{-6}$	2,47
Os-La 0,5%	2,71	$6 \cdot 10^{-6}$	2,20

Orig. art. has: 1 table.

SUB CODE: 20, 09 / SUBM DATE: 17Nov65 / ORIG REF: 002 / OTH REF: 002

Card 2/2 LC

KOSTYKOV, Yu.V.; YERMOLAYEV, L.N.; VLADIMIROV, V.G., podpolkovnik,  
redaktor ; ~~LEVINSKAYA, N.Z.~~, tekhnicheskij redaktor.

[Radio arater's first book] Pervaya kniga radioliubitelia.  
Moskva, Voen.isd-vo Ministerstva obrony SSSR, 1955. 301 p.  
(Radio-- Amateurs' manuals) (MLRA 8:11)

KOSTYKOV, Yuriy Vasil'yevich; YERMOLAYEV, Lav Nikolayevich; VLADIMIROV,  
V.T., red.; MEDNIKOVA, A.N., tekhn.red.

[First book for the radio amateur] Pervaya kniga radiolubitel's.  
Izd.2., perer. i dop. Moskva, Voen.izd-vo M-va obor.  
SSSR, 1961. 287 p. (MIRA 14:3)  
(Radio)

YERMOLAYEV, L. [5]

"Projective Image of a Surface," Dok. AN, 26, No. 8, 1940.

YERMOLAYEV, L. [5]

"Some Classes of Punctual Connexions of Surfaces, Determined by Projective Images."

Dok. AN, 27, No. 5, 1940. c1940-.



YEREMAYEV, L. S.

Klassifikatsiya vzaimno odnoznachn ykh tochechnykh sootvetstviy analiticheskikh poverkhnostey. Dan, 31(1941), 425-427. Differentsial' naya geometriya vektornogo polya, kompleks pryamkh, opredelyaemkh polem. Tomsk, Izv. NII mater. i mekh. un-ta, 3:1 (1946), 111-124.

SO: Mathematics in the USSR, 1917-1947  
edited by Kurosh, A. G.,  
Markushevich, A. I.,  
Rashevskiy, P. K.  
Moscow-Lenigrad, 1948

YERMOLAYEV, I.S., kandidat tekhnicheskikh nauk.

Characteristics of memory devices using magnetic number-code  
recording and operating on the parallel principle. Trudy MVU  
no.55:34-46 '55. (MLRA 9:8)  
(Information storage and retrieval systems)

YERMOLAYEV, L.S., kandidat tekhnicheskikh nauk; PETROV, V.Ya., inzhener.

Effect of the precision in magnetic recording machines on the  
value of bending generatrices of wide magnetic tapes. Trudy NVTU  
no.55:62-75 '55. (MLRA 9:8)  
(Magnetic recorders and recording)

YERMOLAYEV, L.S., dots., kand.tekhn.nauk

Semiconductor rectifiers. Elek. i topl.tiaga 2 no.4:40-43 Ap '58.  
(MIRA 12:3)

(Transistors)

VOLKOV, N.P.; YERMOLAYEV, L.S.; RADIONOV, V.A.

Magnetoelectric induction converter with a high-frequency inductor.  
Priberostroyeniye no.9:19-20 S '60. (MIRA 13:9)  
(Electric current converters)

YERMOLATEV, Lev Sergeyevich, kand. tekhn. nauk; NEKHLYUDOVA, A.S., red.;  
NAZAROVA, A.S., tekhn. red.

[Nature of light] Priroda sveta. Moskva, Izd-vo "Znanie" Vses.  
ob-va po rasprostraneniю polit. i nauchn. znaniy, 1961. 40 p.  
(Narodnyi universitet kul'tury. Estestvennonauchnyi fakul'tet,  
no.7) (MIRA 14:9)

(Light)

13 2720

37857

S/049/62/000/006/002/002  
D207/D304

AUTHORS: Morozov, V.M., Bolyunova, A.D. and Yermolayev, M.A.

TITLE: On calibrating photoelectric measurements of weak light sources

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya geofizicheskaya, no. 6, 1962, 840-844

TEXT: During the IGY the authors measured photoelectrically the night-sky emission using, as light standards, two ZnS:Cu phosphors ~~FK~~<sup>PK</sup>-106 (FK-106) activated with radioactive nuclides Cs<sup>137</sup> (phosphor No. 1) and Sr<sup>90</sup> (phosphor No. 2). The phosphors were developed and prepared at the Laboratoriya lyuminestsentsii fizicheskogo instituta im. P.N. Lebedeva AN SSSR (luminescence Laboratory, Physics Institute imeni P.N. Lebedev, AS USSR). The present paper reports a study of the variations of the intensity of emission of these two phosphors with temperature and with time. The temperature varied from about -5°C to about +40°C. Before measurements, the phosphors were kept at each of these temperatures for several

Card 1/3

On calibrating photoelectric ...

S/049/62/000/006/002/002

D207/D304

hours in order to reach equilibrium. It was found that at a certain emission wavelength  $\lambda^1$  (5550 Å for phosphor No. 1 and  $< 5280$  Å for No. 2) there was no change of the emission intensity on heating from  $-5^\circ\text{C}$  to  $+40^\circ\text{C}$ . At  $\lambda < \lambda^1$  the change was negative (a decrease) and at  $\lambda > \lambda^1$  the change was positive (a rise). If sufficient time was not allowed for the phosphors to reach equilibrium, then a temperature drop produced first a fall of the emission intensity, followed by a slow rise to the equilibrium value; this happened even at  $\lambda = \lambda^1$ . The emission intensity of the phosphors decayed with time faster than was expected from the decay of the radioactive activators: 15-35% fall (varying with the emission wavelength) for phosphor No. 1 after  $11\frac{1}{2}$  months; 10-25% for phosphor No. 2 also after  $11\frac{1}{2}$  months. If these variations with time and temperature are allowed for, the phosphors can be used successfully as weak light sources suitable for calibration of photometers. The authors thank V.L. Levshin and L.A. Pakhomicheva for supplying the phosphor materials and for advice. There are 1 figure and 2 tables.

Card 2/3



On calibrating photoelectric ...

S/049/62/000/006/002/002  
D207/D304

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki atmosfery  
(Institute of Physics of the Atmosphere USSR)

SUBMITTED: January 24, 1962

*f*

Card 3/3

YERMOLAYEV, M.D.  
26(4)

PHASE I BOOK EXPLOITATION

SOV/2023

Rumyantsev, Sergey Vasil'yevich, Mikhail Dmitriyevich Yermolayev,  
Vladimir Ivanovich Domrachev, Aleksey Sergeyevich Tikhonov, and  
Aleksandr Alekseyevich Bulavkin

Issledovaniye fakel'noy sistemy zazhiganiya primenitel'no k aviat-  
sionnym dvigatelyam (Analysis of Flame Ignition as Applied to Air-  
craft Engines) Moscow, Oborongiz, 1958. 111 p. (Series: Kazan'.  
Aviatsionnyy institut. Trudy, 39) No. of copies printed not given.

Ed. (Title page): S.V. Rumyantsev; Ed. (Inside book): S.I. Bumshteyn,  
Engineer; Ed. of Publishing House: M.S. Anikina; Tech. Ed.: L.A.  
Garnukhina; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This book may interest workers of research organizations,  
designers of mobile and stationary engines, and also instructors  
and students of vuzes.

COVERAGE: This book analyzes the working process in piston engines  
with flame ignition and shows the advantages of this type of ig-  
nition over other types. The theoretical considerations presented  
were verified experimentally. The designed and tested experimental

Card 1/6

# Analysis of Flame (Cont.)

SOV/2023

engine units with precombustion chambers made possible optimum design of construction elements and selection of optimum parameters of the working process. The book briefly describes work done by the collective of the Department of the Theory of Aircraft Engines of KAI (Kazan' Aviation Institute) on aircraft flame ignition engines and describes achievements in this field reflected in Soviet literature. The following personalities connected with this branch of science are mentioned: A.S. Sokolik and A.N. Voinov, Institut Khimicheskoy fiziki, AN SSSR (Institute of Chemical Physics, Academy of Sciences, USSR); L.A. Gussak; M.M. Maslennikov; S.M. Kogarko; and S.D. Kolosov. There are no references.

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Analysis of Flame (Cont.)

SOV/2023

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Analysis of Flame (Cont.)

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AVAILABLE: Library of Congress  
Card 6/6

IS/sfm  
7-28-59

YERMOLAYEV, M.D.

Organization of the combustion process of a heavy fuel in  
combustion chambers of gas-turbine units. Trudy KAI no.66:  
3-17 '61. (MIRA 16:10)

(Gas turbines)

(Combustion)



ACCESSION NR: AT4024391

S/2529/61/000/006/0003/0017

AUTHOR: Yermolayev, M. D.

TITLE: The organization of a heavy grade liquid fuel burning process in combustion chambers of gas turbine installations

SOURCE: Kazan. Aviatzionnyy Institut. Trudy\*, no. 66, 1961. Aviatzionnyye dvigateli (Aircraft engines), 3-17

TOPIC TAGS: combustion chamber, turbine, gas turbine, gas turbine installation, aviation, aircraft industry, kerosene, gas turbine fuel, combustion, bunker oil, fuel oil, crude oil, oil, nozzle, turbine nozzle, ceramic lining

ABSTRACT: Gas turbine installations, which at the present time are used extensively in aviation, are beginning to find a wide application in the national economy. At this stage, experience gained in the aircraft industry is applied to the development of stationary and transportation gas turbine installations. At the same time, the necessity arises to use as a gas turbine fuel the heavier fractions of petroleum distillates instead of kerosene. In 1959, investigations were made at the Kazanskiy Aviatzionnyy Institut

Card

1/5

ACCESSION NR: AT4024391

(Aviation Institute of Kazan) on the organization of the combustion process of a heavy grade fuel oil (mazut F-12) in a combustion chamber section of a transportation gas turbine installation. Specifications listing the required parameters and a description of two steady and one starting systems required for the test were given by the author. The scope of the required investigations was divided into two phases. The basic results obtained during only the first phase of work were further described. Following are some data on the tested, heavy-grade, bunker oil (mazut F-12): specific weight - 0.927 g/cm<sup>3</sup>, lower heat value - 9791 kcal/kg, theoretical air quantity required for complete combustion of 1 kg of fuel oil - 13.9 kg air/kg fuel, freezing point - minus 7 C, composition (percent) - carbon 86.3, hydrogen 9.1, sulphur 2.0, water 1.6, oxygen+nitrogen 0.9, and ashes 0.1, of which 60 % form resinous substances. The viscosity of heavy bunker oils is about 60-100 E at 20 - 10 C; therefore, a preheat of fuel oil to 100-120 C is applied to ascertain sufficient atomizing. Elsewhere, following preheating temperatures were recommended: solar oil - to 122 C; heavy bunker oil (mazut) - to 184 C; industrial grade fuel oil (mazut) - to 194 C; crude oil from Ukhta - to 108 C. In transportation-gas-turbine installations, such high preheating can create some operational difficulties. It was proposed that the heavy fuel oil be preheated to only 60-70 C, corresponding to 8 E, and

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ACCESSION NR: AT4024391

to develop mixing methods with air, ascertaining an effective combustion. Nozzles of industrial boiler installations using air or steam-atomizing were not satisfactory in the case of transportation installations where the heat load per unit volume of flame space is much higher. Attention was drawn to the possibility of improving the combustion process by an application of ceramic lining in the combustion chamber or of a muffle around the root of the torch, thus also improving the fouling characteristics. However, the tested combustion chamber was not lined. The experimental part of the investigation was conducted in two installations; in one of them the fuel nozzles were cold-tested; in the other, combustion tests were run on an assembled nozzle with a combustion chamber. Six different nozzle types were tested. In the cold tests, the fuel oil temperature was varied from 15 to 100 C. Following parameters were determined for each of the nozzle types: capacity, atomization angle, distribution of fuel in cross-sections of the torch at various fuel supply pressures and preheat temperatures. At nozzles with air-atomizing, atomizing air supply pressures were also recorded. In combustion tests, the fuel oil was preheated. The combustion chamber was started on kerosene or diesel oil; when the basic fuel oil reached the preheat temperature, the starting fuel supply was cut off. Basically, the following combustion characteristics were determined as a function of the air excess coefficient: completeness of combustion; gas temperature and non-uniformity of the temper-

Card 3/5

ACCESSION NR: AT4024391

ature field at the combustion chamber outlet, heat load per unit volume of flame space, and the pressure efficiency. In addition, fuel temperature, atomizing air pressure, and other parameters were determined. On the basis of the performed tests, it was concluded that: (1) it is possible to organize an effective combustion of heavy grade fuel oil (mazut F-12) in combustion chambers of gas turbine installations with a heat load per unit flame space volume of  $5 \times 10^6$  to  $30 \times 10^6$  kcal/hr-m<sup>3</sup>-ata; (2) it is possible to obtain combustion chamber pressure efficiencies of 0.92 - 0.95; (3) nozzle type No. 6 (see Fig. 1 of the Enclosure) gives the best results in the tested combustion chamber. Combustion completeness of 0.98 - 0.99 was obtained in the air excess coefficients ranges of 4.5 to 10.5 during the basic, steady states of operation; nozzle No. 6 was of a two-stage centrifugal type, suitable for work with mazut F-12 without air atomizing in the range of air excess coefficients 4 to 15 at a fuel supply pressure above 15 kg/cm<sup>2</sup> and a fuel preheat above 100 C; (4) in starting and cruising systems, and at lean mixtures (air excess coefficient greater than 15), and at fuel supply pressures below 15 kg/cm<sup>2</sup>, the necessity arises to apply additional air-atomizing; in nozzle No. 6, the consumption of atomizing air is 5 to 10 g/sec, at a pressure 2 to 4 kg/cm<sup>2</sup> higher than at the inlet of the combustion chamber; (5) a preheat temperature of mazut F-12 is not lower than 100 C.

Card 4/8

ACCESSION NR: AT4024301

The work was carried out at the Kazanskiy aviatsionnyy institut (Kazan Aviation Institute) by an organized group consisting of M.D. Yermolayev, A.A. Bulavkin, V.A. Kostorin, I. N. Dyatlov, A. Ya. Khismatullin, A. L. Novikov, and E.A. Petrov under the supervision of Yu. K. Zastel. Orig. art. has: 2 formulas, 8 figures, and 4 tables.

ASSOCIATION: Aviatsionnyy institut, Kazan (Aviation Institute, Kazan)

SUBMITTED: 25May61

DATE ACQ: 15Apr64

ENCL: 01

SUB CODE: FP, PR

NO REF SOV: 008

OTHER: 001

Card 5/8

YERMOGLAYEV, A.G.

Park in the Petrovskoye-Razumovskoye Farmstead, memorial of  
orchard growing in the 18th century. Izv. TSKhS, no. 6:213-224  
'64 (MIRA 18:1)

1. Stantsiya dekorativnogo sadovodstva Moskovskoy ordena  
Lenina sel'skokhozyaystvennoy akademii imeni K.A. Timiryazeva.

YEREMOLAYEV, M.G., nauchnyy sotrudnik

Restoring the park of the Timiriazev Agricultural Academy [with  
summary in English]. Izv. TSKhA no.6:227-235 '58. (MIRA 12:1)  
(Moscow Province--Parks)

YEMOLAYEV, M. M.

Geological and Geomorphological Notes on the Bol'shiye Lyakhovskiy Islands.  
Trudy. Sov. Nauch. Proizvod. Sil. Sev. Yakutsk #7, 1932.

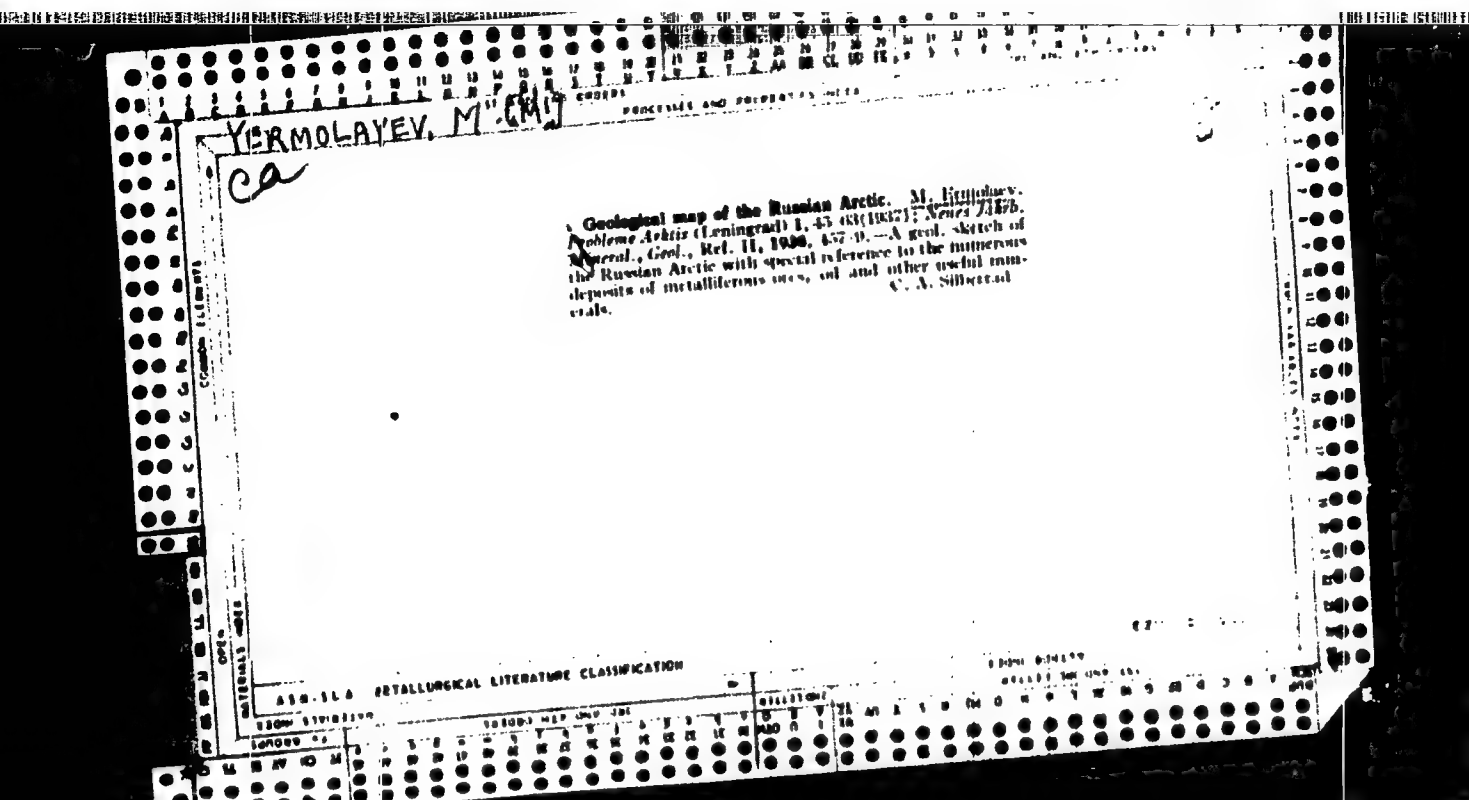
SO: Trudy Arkhivskogo Nauchno-Issledovatel'skogo Instituta, GUSMF,  
Council of Ministers, Vol 201, 1948



YERMOLOV, M. M.

Geology and Minerals of the Novosibirsk Archipelago.  
Trudy Sov. Po Izuch. Proisvod. Cisl Yakutsk ASSR. #2 1933

SO: Trudy Arkitcheskogo Nauchno-Issledovatel'skogo Instituta, GUSMP,  
Council of Ministers, Vol 201, 1948



Yermolayev, M. M.

CS  
YERMOLAYEV, M. M.

PROCESSES AND DEPOSITS INDEX

Radioactivity and composition of Kara Sea mud. 1. M. Kurlov and M. M. Yermolayev. *Problemy Arktiki* 2, 67 (1957); *Soviet Jour. Mineral. Geol.*, Ref. 11, 1959, 1967. Exam. of a column of material (80 cm. wet, 70 cm. dry) taken from the bottom (565 m.) of the Kara Sea showed a decrease in its content from the top to a depth of 18-22 cm., below which it increases. Similarly the largest content of Th X occurred at the top of the column. No radioactive minerals were detected, but a change in the material with which the radioactivity was connected was noted at about 20 cm., where it is inferred that about 1000 years (perhaps more) ago a change occurred in the character of the deposits. C. A. S.

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

YERMOLAYEV, M. M.

Glaciological Excursion to Shokal'skiy Glacier at Russkaya Gavan.  
Mezhdunar. Geol. Kongr. XVII sessiya Novozemel'skaya Ekskursiya #2, 1937.

SO: Trudy Arkticheskogo Nauchno-Issledovatel'skogo  
Instituta, GUSMP, Council of Ministers, Vol 201,  
1948

YERMOLAYEV, M. M.

USSR/Hydrology  
Oceanology  
Clays

Jan/Feb 1948

"Lithogenesis of Plastic Clay Sea Sediments," M. M.  
Yermolayev, 17 p

"Izv Akad Nauk SSSR, Ser Geol" No 1

Describes primary stages of the lithogenesis of plastic clay sediments. Particular attention is paid to the Atlantic type of bottom of the Arctic seas of Eurasia. Discusses chemical composition. Explains reasons for uneven lithogenesis. Describes microorganisms found in these sediments and also the hydrogeological regime of the water systems. Gives some

Notes

USSR/Hydrology (Contd)

Jan/Feb 1948

reasons for the great changes in the conditions of the Kara Sea. Author studied distribution of manganese and radium to determine the absolute speed of settling and the stability of those changes occurring in the material of the sea bottom during the first stages of lithogenesis.

hmmh

YAKUBOVICH, M. M.

"Problems of Historical Hydrology of Seas and Oceans, VOZROJZENIYE (Problems of Geography) Symposium 7, 1988 (17-36)

SO: U-3032, 11 Mar 1953

ZUBEKOV, A.I.; YERMOLAYEV, M.M., ed. red.; BIRKENGOF, A.L., red.; GEMBEL',  
A.V., red.

[Climate of the U.S.S.R., lectures in a course on "Physical  
geography of the U.S.S.R."] Klimat SSSR; lektsii po kursu  
"Fizicheskaya geografiya SSSR." Leningrad, Leningr. gos. pedagog.  
in-t, 1957. 37 p. (Russia--Climate) (MIRA 11:12)

AFANAS'YEV, A.P.; ~~YERMOLAYEV, M.M.~~

Mineralogy of the ancient weathering crust of the western slope  
of the Baltic Shield. Izv.Kar.i Kol.fil.AN SSSR no.5:23-37  
'58. (MIRA 12:9)

1. Geologicheskii institut Kol'skogo filiala AN SSSR.  
(Baltic Shield--Mineralogy)



3(5)

SOV/12-91-2-3/21

AUTHOR: Yermolayev, M.M.

TITLE: On the Paleo-Geomorphological Origin of the Eastern Slopes of the Baltic Platform and Some Data on the Formation of its Present Relief.

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1959, Nr 2, pp 137-148 (USSR)

ABSTRACT: The author studied the underground formations in the Eastern slope of the Baltic platform covered by a stratum of deposits. The platform has an overall direction from South to North, but it bends eastward (tables 1 + 2) in the middle part of the Onega River. The stratum has a great variety of geological elements (table 3) (including carbon) based mainly on a granite foundation. The author describes in detail the geological survey carried out by him. He refers to the work in this area previously done by the Ministerstvo geologii i okhrany nedr SSSR (Ministry of Geology and Conservation of Natural

Card 1/2

SOV/12-91-2-3/21

On the Paleo-Geomorphological Origin of the Eastern Slopes of the Baltic Platform and Some Data on the Formation of its Present Relief.

Resources of the USSR) and mentions the names of geologists A. Afanasyev, A.I. Lebedintsev, M.F. Vikulova, G. Fanderflit. There are 3 tables, 3 maps and 2 diagrams.

Card 2/2

YERMOLAYEV, M.M.

Geochemistry of rare-metal granitic pegmatites. Nauch.dokl.  
vys.shkoly; geol.-geog.nauki no.2:147-154 '59. (MIRA 12:8)

1. Leningradskiy universitet, geograficheskiy fakul'tet, kafedra  
fizicheskoy geografii.

(Metals, Rare and minor)

21(4)  
2(5)

SOV/12-91-3-1/14

AUTHOR: Yermolayev, M.M.

TITLE: The Possibility of Employing Various Methods of Contemporary Physics to Examine the Geographic Cover of the Earth

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1959, Vol 91, Nr 3, pp 205-219

ABSTRACT: This is a study concerning the use of modern physics by geographers to help them solve some of their problems. The study is divided into 4 sections: 1) determination of absolute age as a geographical problem; 2) the "sealed" vestiges and their utilization in paleogeography; 3) experimental physical geography; 4) geographical distribution of the H-bomb fallout. In the first section, an account is given of the geographical-chronological work done up to date by the use of: 1) the slow radioactive reactions, e.g. uranium lead, are of no use for geography; 2) inter-

Card 1/3

SOV/12-91-3-1/14  
The Possibility of Employing Various Methods of Contemporary  
Physics to Examine the Geographic Cover of the Earth

mediary radioactive elements, e.g. 17 isotopes in the chain between uranium and lead; 2) the elements which are gradually formed in the geographical crust of the Earth under the influence of cosmic rays, especially  $H^3$ ,  $C^{14}$ ,  $Cl^{36}$  and  $Be^{10}$ ; d) radioactive elements as components of the H-bomb fallout. The  $Al^{26}$  isotope is recommended for special attention by physico-geographers. Two methods are discussed in the 2nd section of the survey. The paleothermic method, where special attention is given to  $O^{16}$  and  $O^{18}$  isotopes and their role in the biosphere, and the paleomagnetic method. The author recommends further development of the work of Clayton and Epstein (Jour. Geol., 66,3, 1958): They studied the  $O^{18}/O^{16}$  ratios in coexisting quartz, carbonate and iron oxides from various geological deposits. The author points out to the specialists the neglected fact that water, which is bound to the structural grid of some clayish minerals

Card 2/3

SOV/12-91-3-1/14

The Possibility of Employing Various Methods of Contemporary  
Physics to Examine the Geographic Cover of the Earth

(e.g. kaolinite), can be a carrier of the height of temperature mark at the time at which the reaction took place. The author reports that a simple, portable magnetometer, based on nuclear resonance, is already constructed. The prehistorical locations of Earth's magnetic poles could be established in that way. American studies are reviewed in section 3. The fourth section shows that the entire biosphere of the Earth is in immediate danger of the effects of the H-Bomb fallout, especially by the radioactive strontium provoking cancer. The author finally proposes to organize a special committee to conduct paleogeographic research. This committee is to eventually be annexed to the VGO SSSR. His other proposal is to organize a special paleogeographical laboratory within VGO or to attach it to the Leningrad University. There is 1 table and 51 references, 30 of which are English, 11 Soviet, 6 German and 4 French.

Card 3/3

S/081/61/000/024/019/086  
B138/B102

AUTHOR: Yermolayev, M. M.

TITLE: Certain forms of interaction between lithosphere and biosphere

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1961, 126, abstract 24C12 (Dokl. na yezhegodn. chteniyakh pamyati L. S. Berga, IV - VII, 1956 - 1959. M.-L., AN SSSR, 1960, 75 - 100)

TEXT: A study of the relationship between lithosphere and biosphere leads to the conclusion that there are four main forms: fermentative, vitamin, hormonal and tissue. Deviations from the first form lead to the appearance of biochemical provinces of physiological and general excess or deficiency, and the provinces of phytocoenosis and biocoenosis do not coincide. The formation of such provinces is due to specific geological, geomorphological and physico-geographical conditions. For the vitamin and hormonal forms, biogeochemical deficiency provinces are known. Examples are given. It is stated that individual geochemical features have a systematic influence on the process of natural selection in plant

Card 1/2

Certain forms of interaction between ...

S/081/61/000/024/019/086  
B138/B102

and animal life. [Abstracter's note: Complete translation.]



Card 2/2



S/C81/62/000/005/016/112  
B158/B110

AUTHOR: Yermolayev, M. M.

TITLE: Biogeochemical anomalies in the landscape as a result of interaction of lithosphere and biosphere

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 118, abstract 5G8 (Uch. zap. Latv. un-t, v. 37, 1961, 43 - 54)

TEXT: All the numerous processes of interaction of live and "dead" matter may be reduced to four connecting lines (through ferments, vitamins, hormones, and somatic effect) which lead to the participation of mineral substances in the formation of tissues and organisms. Such analysis is conditional since all four lines of interaction appear in nature simultaneously and only their joint, synchronous action has any biological significance. Examples are cited where these lines are broken, causing the emergence of a number of biogeochemical anomalies. [Abstracter's note: Complete translation.]

Card 1/1

YERMOLAYEV, M.M.

Several general laws causing the discreteness of geographical  
surroundings. Uch. zap. LGU no.317:54-66 '62. (MIRA 16:6)  
(Physical geography)

BOCRISOV, A.A.; YERMOLAYEV, M.I.; KATTERFEL'D, G.N.; KOZLOV, V.V.; KOZYREV, N.A.;  
LOZINA-LOTINSKIY, I.K.; LYUBARSKIY, K.A.; SUSLOV, A.K.; FROLOV, P.M.;  
KHODAK, M.A.

Nikolai Ivanovich Kucherov, 1891-1965; obituary. Izv. Vses. geog.  
ob-va 77 no.4:328-390 JL-Ag '65. (MIRA 18:8)

YERMOLAYEV, I. M. (Kiyev)

From the history of the development of health education in the  
Ukraine, 1917-1927. Vrach, delo no.8:139-140 A. '60. (MIRA 13:9)  
(UKRAINE—HEALTH EDUCATION)

YERMOLAYEV, M.M., nauchnyy sotrudnik

Amateur talent activities in health education. Gig.1 san. 25 no.8:  
36-38 Ag '60. (MIRA 13:11)

1. Iz Ukrainskogo instituta kommunal'noy gigiyeny.  
(HEALTH EDUCATION)

.. YERMOLAYEV, M.M., nauchnyy sotrudnik

Universities of health and health education. Gig. i san. 26 no.11:  
68-71 N '61. (MIRA 14:11)

1. Iz Ukrainского nauchno-issledovatel'skogo instituta kommunal'noy  
gigiyeny.

(UKRAINE--HEALTH EDUCATION)

YERMOLAYEV, M.N.; CHOCHIA, N.S.; KRYM, I.Ya.

Geochemical method for studying landforms and some characteristics  
of the migration of trace elements in the Or'-Kumak watershed  
(Southern Urals). Vest. LGU 17 no.18:95-108 '62. (MIRA 15:10)  
(Ural Mountains--Geochemistry)  
(Ural Mountains--Trace elements)

YERMOLAYEV, M.P.

TIKHOMIROV, S.S., inzhener; YERMOLAYEV, M.P., inzhener.

Streetcar equipped with track polishing machinery. Gor.khoz.Mosk. 25 no.7:  
38-39 JI '51. (MIRA 6:11)

(Moscow--Street railroads) (Street railroads--Moscow)



*YERMO LAJEV, M.P.*

TIKHOMIROV, S.S., inzhener; YERMOLAYEV, M.P., inzhener.

New streetcar. Gor.khoz.Mosk.25 no.8:30-31 Ag '51.  
(Streetcars)

(MIRA 10:1)

*Yermolayev M.P.*

ALEKSEYEV, Aleksandr Petrovich; KAPITANOVSKIY, Lev Nikolayevich; TASTEVAN, Yevgeniy Edmundovich; CHEZHIK, Nikolay Ivanovich; SHPOLYANSKIY, Mikhail Leonovich; YERMOLAYEV, M.P., inzh., retsenzent; VOGNERSEKSKIY, N.N., inzh., red.; TIKHANOV, A.Ya., tekhn.red.

[All-metal streetcars; design, manufacture, and operation] TSel'no-metallicheskiy tramvainyi vagon; konstrukttsia, tekhnologiya proizvodstva i ekspluatatsiya. Moskva, Oos.nauchno-tekhn.isd-vo mashinostroit. lit-ry, 1958. 287 p. (MIRA 11:7)  
(Streetcars)

YERMOLAYEV, M.P.

Machining speed surfaces on a vertical boring and turning  
lathe. Mashinostroitel' no.9:31-33 S '65.

(MIRA 18:12)

YERMOLAYEV, M.V.

"The Use of Nicotinic Acid to Increase the Effectiveness of  
Corn Rations During the Meat Fattening of Pigs";

dissertation for the degree of Candidate of Agricultural Sciences  
(awarded by the Timiryazev Agricultural Academy, 1962)

(Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, Moscow, No. 2,  
1963, pp 232-236)

CHERNIKOV, M.P.; YERMOLAYEV, M.V.

Hydrolysis of egg albumin with pepsin and the effect of thermal protein denaturation, acid medium and the addition of plant oil and carbohydrates on this process. Vop. pit. 23 no.2:31-35 Mr-  
Ap '64. (MIRA 17:10)

1. Laboratoriya biokhimii pitaniya Instituta AMN SSSR, Moskva.

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YERMOLAYEV, N. F.

Flotation of copper-containing tailings from the magnetic separation of ore from the Gornoy mine in Vologorsk. M. Kuznetsov. *Novosti Tekhniki, Seriya Gornodolovaya*, 1959, No. 4, 15-16. Tailings obtained in the magnetic sep. of Fe from this ore contain Cu, Au and Ag. Up to 80-85% of the Cu can be removed by cogen. and flotation; the tailings then contain about 0.2% Cu present mainly as oxide. The flotation media used are 0.15 kg. K ethylsulfate, 0.04 kg. pine oil and up to 5 kg. Cal per ton of ore. Up to 48.47% of Au and 24.47% Ag can be extd. from the Cu concentrate. A. A. Borzhilovsk

YERMOGLAYEV, N.F.

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Development of the Centrifugal Casting Process for the Production of Cast Iron and Steel Tubes. N. Yermoglayev. (Izvestiya Akad. Nauk SSSR, No. 5-6, pp. 70-74). (In Russian). The progress of centrifugal casting abroad is reviewed and developments in this field in the U.S.S.R. are dealt with.

A.I.B.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

1900M STEELWORK  
19000M STEELWORK

COLLECTOR'S NAME AND ADDRESS

1900M STEELWORK

19000M STEELWORK

ERMOLAEV, NIKOLAI FEDOROVICH

Podruchnyi trubosvarshchika. Utv. v kachestve uchebnika dlia remesl. uchilishch.  
Moskva, Metallurgizdat, 1944. 138 p. illus.

Pipe welder's assistant.

DLC: TS280.E68

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of  
Congress, 1953.



~~ERMOLAEV, N. F.~~

YERMOLAYEV, N. F.

Author: Ermolaev, Nikolai Fedorovich

Title: Welding of Pipes. (Svarshchik trub.

City: Moscow

Publisher:

~~Publication~~ State Scientific and Technical Publication of the curds and chromium metallurgy.

Date: 1945

Available: Library of Congress

Source: Monthly List of Russian Acquisitions. Vol. 3, No. 12, p. 837

YERMOLAYEV, N. F.

"Continuous Zinc Plating of Pipes", Stal', No. 7, 1948.

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Mekhanicheskoe oborudovanie trubnykh tsekhov. 2. izd. Utverzhdeno v kachestve uchebnika dlia metallurgicheskikh tekhnikumov. Moskva, Metallurgizdat, 1949. 540 p. illus.

Bibliography: p. [539]-540.

Mechanical equipment of machine shops for pipe production.

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YERMOLOV, N.P.; MATVEYEV, Yu.M., redaktor; GORDON, L.M., redaktor.

[Pipe rolling production] Truboprokatnoe proizvodstvo. Moskva, Gos.  
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451 p. (MIRA 7:6)

(Pipe, Steel) (Rolling (Metalwork))

YERMOLAYEV, N.F., inzhener.

"Continuous pipe rolling" by A.A. Shevchenko. Reviewed by N.F. Ermolaev.  
Stal' 16 no.10:951-953 O '56. (MIRA 10:9)

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(Pipe, Steel) (Rolling (Metalwork)) (Shevchenko, A.A.)

YERMOLOV, N. F.

18(0)

PHASE I BOOK EXPLOITATION

SOV/2316

Akademika nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii

Metallurgiya SSSR, 1917-1957; [t.] II (Metallurgy in the USSR, 1917 - 1957; Vol 2) Moscow, Metallurgizdat, 1959. 813 p. Errata slip inserted. 3,000 copies printed.

Ed. (Title page): I. P. Bardin, Academician; Ed. (Inside book): G. V. Popova; Tech. Ed.: P. G. Isent'yeva.

PURPOSE: This book is intended for metallurgists.

COVERAGE: The articles in this collection present historical data on the achievements of Soviet metallurgy, both ferrous and nonferrous, during the period 1917-1957. Advances in theory and practical application are thoroughly discussed. Many of the articles describe the present status of individual branches of metallurgy and give an idea of what may be expected in the future. Advances made in other countries are also discussed. The articles are accompanied by a large number of references. For further coverage, see Table of Contents.

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**Metallurgy in the USSR (Cont.)**

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**TABLE OF CONTENTS:**

**Tselikov, A. I.,** Corresponding Member, USSR Academy of Sciences; **Ye. S. Rokotyan,** Doctor of Technical Sciences; **N. P. Gromov,** Candidate of Technical Sciences. (Ts NITMASH and TsNIICHM) Production of Rolled Stock 3

The authors present a historical review of the production of rolled stock in czarist Russia and the Soviet Union from 1721 to 1957. Developments in rolling technique and in the design of rolling mills for various purposes are discussed.

**Yermolayev, N. F.,** Engineer; and **P. K. Teterin,** Candidate of Technical Sciences. (TsNIICHM) Production of Steel Tubes 38

The article briefly outlines the history of steel-tube production in the USSR (beginning in 1893) and in other countries. The main methods of manufacturing seamless and welded steel tubular products at various Soviet and non-Soviet plants are described. There is some discussion of equipment.

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**Pavlov, I. M., Corresponding Member, USSR Academy of Sciences, Professor, Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Scientific Study of the Rolling Process**

56

This article is an extensive survey of scientific writings on the rolling process published in various countries including the USSR since 1859. The writings deal with historical development, friction between rolls and metal, force and power relations, deformation, high-speed rolling, and special methods of rolling.

**Bardin, I. P., Academician; and L. L. Pinkhusovich, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) The Rail Problem**

82

Historical information on the development of engineering standards for the acceptance of rails and on the amount of rails manufactured by openhearth, Bessemer, and Thomas processes is presented. Changes in weight and types of rails, improvements in quality and technique (e.g., quenching from rolling temperature and after reheating, use of alloy steel, etc.) are pointed out. Measures taken for further improvement and elimination of defects are mentioned.

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**Metallurgy in the USSR (Cont.)**

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Pinkhusovich, Candidate of Technical Sciences; and A. G. Nikonov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Achievements in Railroad Wheel and Tire Production 101

Changes in engineering specifications and improvements in production techniques and quality of tires and solid wheels in the USSR since 1940 are discussed. Further progress in this field is predicted.

Zimin, A. I., Professor, Doctor of Technical Sciences. (MVTU) Forging and Stamping Methods 113

This is a historical survey of developments in forging and stamping processes in Russia from prerevolutionary times up to 1957.

Levi, L. I. Candidate of Technical Sciences. (Moscow Institute of Machine Design) Production of Castings 141

The paper traces the general course of development and discusses problems in the theory of casting, casting alloys, basic melting processes, molding and core materials, nonmetallic molds, special casting methods (permanent mold casting, die casting, continuous

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casting, centrifugal casting, investment casting, etc.), equipment, mechanization, and automation.

Bel'shin, M. Ya., Candidate of Technical Sciences; and G. V. Samsonov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences; and Institute of Powder Metallurgy, Ukrainian Academy of Sciences) Powder Metallurgy

175

The article is a general survey of the development and present state of powder metallurgy in the USSR. Theoretical and practical aspects of the preparation of cemented and sintered metal products are discussed.

Rykalin, N. N., Corresponding Member, USSR Academy of Sciences; N. O. Okerblom, Professor, Doctor of Technical Sciences; A. A. Yerokhin, Candidate of Technical Sciences; and M. Kh. Shorshorov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences; and Leningrad Polytechnic Institute) Progress in the Science of Welding Metals in the USSR

194

The authors discuss the studies that have been made in the USSR of the theoretical aspects of welding, beginning in the latter part of the nineteenth century. Specific topics are: investigation of the arc,  
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**Metallurgy in the USSR (Cont.)**

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theory of welding deformations and stresses, calculation methods used in planning the industrial production of welded structures, and the theory of strength of welded structures.

Kidin, I. N., Professor, Doctor of Technical Sciences. (Moscow Institute of Steel.) Use of High Frequency Currents in Physical Metallurgy

216

The author discusses the following: types of phase transformations occurring during rapid heating; the magnetic theory of the kinetics of induction heating; interconnection between original structure, steel composition, and the kinetics of heating; structure of austenite formed during induction heating; transformation of austenite into martensite and tempering after high-frequency hardening; ways of improving the technology of induction heat treatment; regimes of induction hardening; and application of induction heating in carburizing.

Gulyayev, A. F., Professor, Doctor of Technical Sciences. (Moscow Evening Institute of Machine Design) Heat Treatment and Thermochemical Treatment of Steel

239

After giving a classification of the types of heat-treating processes, the

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author discusses the thermodynamics, mechanism, and kinetics of phase changes, as well as the formation, decomposition, and transformation of austenite. The concluding section deals with diffusion processes.

**Goloman, Kh. M., Engineer. (Stal'proyekt) Heating and Heat-treating Furnaces in USSR Ferrous Metallurgy**

272

This is a brief historical review of successive developments in the theory and design of various types of heating and reheating furnaces from earliest times up to 1957.

**Ivantsov, G. P., Candidate of Technical Sciences. (TsNIIChM) Theory of Fuel-fired Furnaces**

304

The article presents a review of developments in the theory and design of fuel-fired furnaces (mainly open-hearth) from 1905 to 1957, emphasizing the need for refining the theory on the basis of model testing.

**Lukashevich-Dubanova, Yu. T., Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Investigation of Nonmetallic Inclusions**

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Various methods (metallographic, chemical, vacuum melting, etc.) for determining and removing nonmetallic inclusions and occluded gases are described. Results of investigations are discussed.

**Svet, D. Ya., Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Direct-reading Radiation Pyrometry of Liquid Metals in the USSR**

342

The author outlines the development of pyrometric methods in the USSR and then discusses specific questions of direct-reading radiation pyrometry (electronic systems used, investigation of emissive capacity of metal baths, direct-reading methods of controlling the temperature of metallurgical processes, calibration of systems for color pyrometry, and measurement of actual temperatures in metallurgy by radiation pyrometry).

**Mirkin, I. L., Professor, Doctor of Technical Sciences. (TsNITMASH) Development of Physical Metallurgy in the Soviet Union**

379

The paper reviews the development of physical metallurgy in Russia and other countries during the nineteenth and twentieth centuries, tracing successive advances made in various branches of the science.

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**Arkharov, V. I., Professor, Doctor of Technical Sciences; and Vonsovski, S. V., Corresponding Member, USSR Academy of Sciences. (UFAN) Present State of the Physics of Metals**

406

The authors define the subject matter of metallophysics, discussing the basic concepts of the quantum (electron) theory of metals and their "electronic" properties. In the second of the two major divisions of the article the authors discuss the contributions of Soviet scientists in various branches of this field.

**Kornilov, I. I., Doctor of Chemical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Chemistry of Metals in the USSR**

440

An account is given of the development of metallochemistry in Russia before and after the Revolution. Work done in specific fields (study of constitution diagrams, intermetallic compounds, and solid solutions) is discussed. The authors conclude by giving their views of the prospects for growth in the field of metallochemistry in the USSR.

**Lozinskiy, M. G., Doctor of Technical Sciences. (Institute of Machine Engineering, USSR Academy of Sciences) New Instruments and Methods for High-temperature Vacuum Metallography**  
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478

**Metallurgy in the USSR (Cont.)**

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This article gives a description of two devices for the metallographic investigation of heated specimens (above 900° C) developed in recent years at the Institute of Machine Engineering, USSR Academy of Sciences. With the first device, designated IMASH-5M, the specimen can be simultaneously studied with respect to its microstructure and the deformation process while in a heated condition and under vacuum; the second device, IMASH-6, is intended for determining the temperature dependence of the modulus of elasticity and of internal friction in metals. In addition, the article describes an instrument for studying the rate of vaporization in metals.

Oshchepkov, P. K., Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) The Problem of Using Penetrating Radiation in Metallurgy

514

The following topics are discussed: development of betatron gamma-ray flaw detection; use of betatrons for activation analysis; development of remote vision in metals; mass-spectrometric methods of analysis; application of ultrasonic image converters in metallurgy; development of new methods of recording weak radiation currents.

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**Metallurgy in the USSR (Cont.)**

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**Borovskiy, I. V., Professor, Doctor of Physical and Mathematical Sciences; and Il'in, M. P., Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) X-ray Spectral Analysis of Metal Composition in Microvolumes**

544

Principles of the method are explained and various types of equipment are described. Application of the method for determining degree of homogeneity, analysis of the composition of phases and microlayers, and study of diffusion layers are discussed.

**Zhukhovitskiy, A. A., Professor, Doctor of Chemical Sciences. (Moscow Institute of Steel) Application of Radioactive Isotopes in the Study of Diffusion in Metals**

569

The author explains the use of radioactive isotopes for studying diffusion and thermodynamic characteristics. In addition, he discusses the connection between diffusion and thermodynamic characteristics of solutions, diffusion throughout the grain and along the grain boundaries, and diffusion in heterogeneous systems.

**Ignatov, D. V., Candidate of Physical and Mathematical Sciences. (Institute**

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**Metallurgy in the USSR (Cont.)**

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of Metallurgy (Imeni A. A. Baykov, USSR Academy of Sciences) Structural and Kinetic Studies of the Mechanism of Oxidation of Metals and Alloys

598

This is a historical survey of investigations which have been conducted in this field both in Russia and other countries from the eighteenth century to the present. The author discusses investigations dealing with the oxidation mechanism at low and high temperatures and with theoretical studies in the field.

Davidenkov, N. N., Academician, USSR. (Leningrad Physicotechnical Institute, USSR Academy of Sciences) Studies in the Strength of Metals

627

The author reviews Soviet works in this field, some dealing with the properties of single crystals, others with polycrystalline specimens.

Kornilov, I. I., Professor, Doctor of Chemical Sciences; and I. I. Pryakhina, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Study of Creep-resistant Alloys in the USSR

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**Metallurgy in the USSR (Cont.)**

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This is a general survey of Soviet works in the field of creep-resistant alloys. The works deal with test methods, development of new high-temperature alloys, and theoretical investigation.

Bernshhteyn, M. L., Candidate of Technical Sciences. (Moscow Institute of Steel) Creep-resistant Alloys

683

The author describes Soviet achievements in the development of high-temperature alloys from the post-Revolution reconstruction period up to 1957. Future prospects are indicated.

Rozenfel'd, I. L., Professor, Doctor of Chemical Sciences. (Institute of Physical Chemistry, USSR Academy of Sciences) Studies in the Corrosion of Metals

714

This paper reviews the most important works on corrosion of metals published between 1917 and 1957. All aspects of the subject (questions of theory, passivity, corrosion-resistant alloys, corrosion under specific conditions, protective films, etc.) are included.

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Gudtsov, N. T., Academician (Deceased); and Mashtakova, L. D., Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Production of High-strength low-alloy Steel

749

The article reviews progress made in the Soviet Union and in other countries in the production of low-alloy steels.

Belov, A. F., Engineer. (State Committee on Aircraft Production Technology) Production of Light Alloys

770

The author describes successive advances made in the production of light alloys. All aspects are covered, including, besides the production of the alloys themselves, the teeming of ingots and the production of castings, sheet, extruded articles and forgings. Heat treatment is also discussed.

Kestner, O. Ye., Candidate of Technical Sciences. (VIAM) Heavy Nonferrous Alloys

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**Metallurgy in the USSR (Cont.)**

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**Soviet accomplishments in the production of bronzes, brasses, nickel alloys, zinc alloys, bearing alloys, solders, heat-resistant alloys of high electrical conductivity, etc., are reviewed.**

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10-27-59**

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red.; KUDRYAVITSKAYA, A.A., tekhn. red.

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LIVSHITS, M.A.; MATYUSEINA, N.V.; MOROZOV, A.M.; POLUKAROV, D.I.;  
RAVINE, P.G.; ROKOTYAN, Ye.S.; SMOLYARENKO, D.A.; SOKOLOV, A.N.;  
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"Production of tubes on automatic and pilgrim rolling mills"  
by S.I. Borisov. Reviewed by N.F. Ermolayev. Stal' 21  
no.3:260-261 Mr '61. (MIRA 14:6)  
(Pipe mills) (Borisov, S.I.)

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